ELECTRICAL WORLD *News Issue*

AUGUST 7, 1950 • 68th YEAR

A McGRAW-HILL PUBLICATION

Walter Sturrock, President of the Illuminating Engineering Society

Selling Appliances in the Tennessee Valley ... Page 72

The Chicago Fair of 1950 ... Page 75

DO YOU KNOW THAT

switched capacitor equipments LIKE THESE now cost less than $7.00 per kvar?

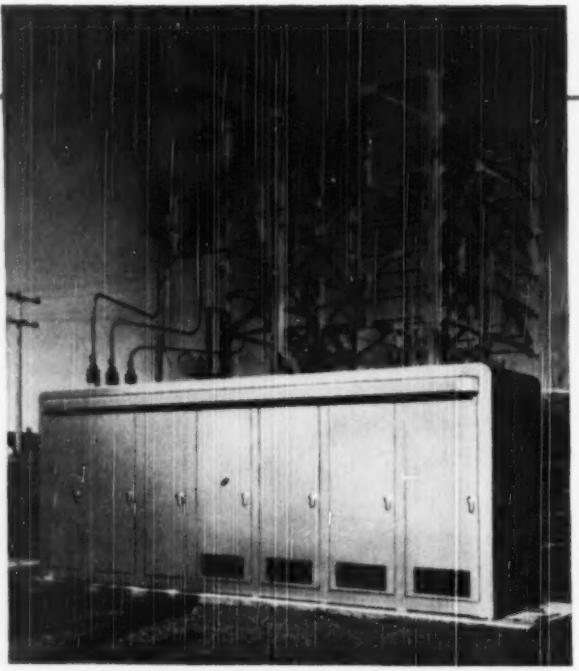
At this low price you should re-evaluate the dollar-benefits that switched capacitors can give you.

Are these conditions present on your system?

(a) Overloaded transformers?
(b) 20% or higher losses on peak?
(c) Low voltage at time of peak or during emergency?

To improve these conditions, you can buy General Electric 13,200-volt automatically switched capacitor equipments for as little as $6.35 per kvar. A small installation expense (1 to 3 dollars per kvar) will have these capacitors operating on your system, economically supplying kilovars, in a matter of days.

It will pay you to consider General Electric switched capacitor equipments for your system—to alleviate peak conditions at a price no other method can match. *Apparatus Depts., General Electric Company, Schenectady 5, N. Y.*



More and more utilities are making large savings with capacitors—often installing capacitor kvar totaling between 20% and 50% of their system peak load. Above, a 1620-kvar capacitor equipment on the system of the Portland General Electric Company, Portland, Oregon.

GENERAL ELECTRIC

The Electrical Week

Already meeting all energy requirements of our booming peacetime economy with generating capacity to spare, the nation's electric utilities are well prepared to carry their share of the mobilization burden. This is due chiefly to the industry's $9-billion expansion program, which pushed total capacity from 38.8 million kw in 1939 to 67.5 million kw in prospect for the end of 1950. And manufacturers of generating equipment, now making another 10-million kw for delivery in 1951-52, have about doubled their production capability (p 4) . . . The industry was speeding up its capacity expansion program, getting planned additions out of blueprints and into equipment orders. American Gas & Electric Co showed the way, advancing its program of system additions approximately six months (p 5) . . . Although industry controls had not been enacted, word from Washington indicated rubber, copper, aluminum and steel would be subject to the first government allocation and priority orders. Theory was that control of the basic metals would indirectly control other metals and alloying materials (p 6) . . . Appliances reportedly are selling like hotcakes on the heels of Tennessee Valley Public Power Association's traveling electrical caravan (p 12) . . . And output continued up—to 6,190 million kwhr in the week ended July 29.

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Steam behind proposed excess profits tax slacked off slightly in Washington last week, to the extent that Congress probably will do nothing about it until next year. But Regulation W—curbing consumer credit—probably will be back by Sept 1. Credit on autos, appliances will be first restricted.

You can't tell the new owners of Pacific Power & Light Co, who took over the Washington-Oregon utility early this year, they made a bad deal. Pacific reported its net income for the 12 months ended June 30 was $3,100,210, compared with $1,570,747 for the preceding 12 months.

Britain has started its 275-kv supergrid with a section of steel tower line out of Staythorpe power station.

Cambridge (Mass.) Electric Light Co is telling its customers that usually New England's hydroelectric plants are good only for peak load service. It might be feasible, from an engineering standpoint, to build high dams in lower river valleys, the utility says, but at the risk of flooding valuable upstream lands and communities.

We Never Would Have Guessed It Dept.: In response to a request for public ownership of coal, oil, water power, gas and railroads, the Budget Bureau vowed "it would not be in conformity with the program of the President to sponsor proposals so far reaching." The People's Lobby, Inc, made the proposals.

Total sales by electrical goods wholesalers are estimated at $469 million during May, highest month since December, 1948. Latest Bureau of Census figures place May sales 9% above April and 12% over May, 1949. First five months of this year topped last year by 6%.

Following price increases have been announced by the Westinghouse Corp: Large motors and control equipment, 10%; Power transformers, 7½%; Distribution transformers, 10%; Switch gear, 10%; Meters, 5%; Relays, 10%; Standard control, 10%; Voltage regulators, 7½%. No increase in turbo-generators but a 10% escalator clause is included in contract.

Notes From The News

The Indiana Public Service Commission has turned down a request of ten Indianapolis residents seeking a special rate for operation of heat pumps for domestic heating. The Commission said, in part, "development of the equipment for this type of heat has not yet reached the state of perfection where it is satisfactory for the ordinary residential user." . . Penn Yan, N. Y., plans to discontinue generating electricity at its municipal plant. It also abandoned tentative plans to build a new electric plant. Instead, the town's electricity will be purchased from New York State Electric & Gas Corp under an existing contract . . . Hydroelectric generation on the New England Electric System in June totaled 84 million kwhr, a 50% gain over a year ago. Rainfall was above average and reservoir storage June 30 was equivalent to 161 million kwhr, a gain of 7.3%. Electric output of the system was up 9.5% since January . . . Nantahala Power & Light Co has been authorized by the North Carolina Utilities Commission to build a hydroelectric project on the Tuckaseegee River in Jackson County. The project, consisting of a dam and a power house, will cost $1-million. A 10,000-hp generator will be installed.

Utilities Better Prepared Now Than in '41

Industry Firming Up Advance Construction Plans; Manufacturers Able to Fill Orders; Central Station Equipment Production High

As WASHINGTON readied industrial controls, the nation's electric utility systems braced themselves last week to carry their share of the President's partial mobilization program. There appeared little doubt that the industry was well prepared for the job.

In virtually every respect, except for some adverse statistics, the electric utilities appeared far better prepared today than they were for mobilization in 1939 and war in 1941. Generating capacity looked adequate for immediate needs. Additional capacity on order for delivery in the next two years appeared just as ample. Inventories of lighter equipment and maintenance equipment were fair to good, with no bottlenecks yet.

Manufacturing Capacity Good

Perhaps the brightest spot, however, was in the production of central station equipment. Manufacturing capacity for virtually all categories was well above that of 1940, with production of generating units nearly doubled. And, as yet, shortages were not hurting production.

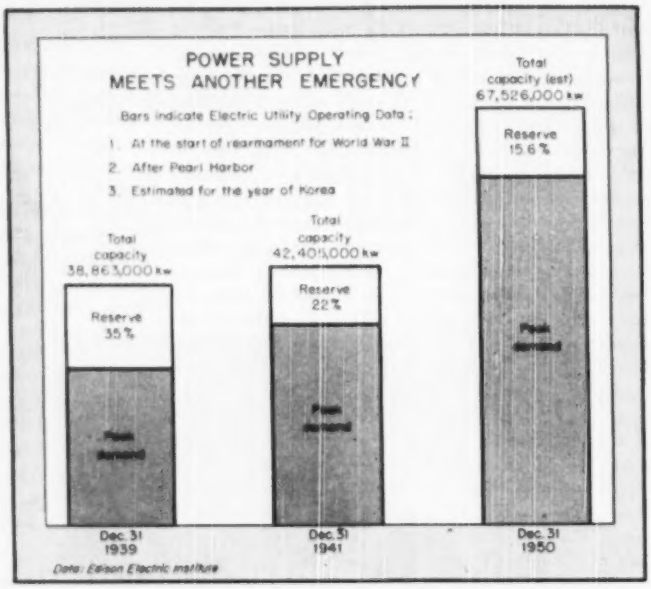
A spot check by ELECTRICAL WORLD revealed the following significant developments last week:

1. Utilities began firming up advance construction plans shortly after the fighting started in Korea. In the last two weeks the plans began progressing from utility drawing boards to manufacturers' order boards.

Orders Being Taken

2. For the present, at least, manufacturers have been taking all new orders without advancing delivery dates or prices. Voluntary allocations adopted by the steel industry have given electrical manufacturers enough of that critical metal to maintain present production schedules. Copper and a few other metals were in short supply, but not so much as to slow deliveries.

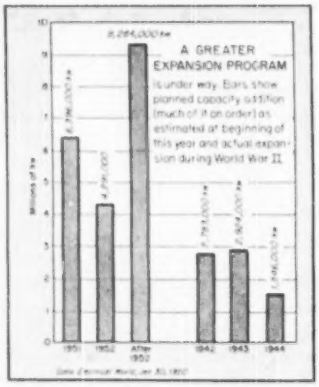
A look at historical records (see charts) produced the single statistical cloud, but it was a virtually meaningless indicator. In 1939, when rearmament for World War II began, electric utilities had reserve capacity amounting to 35% of peak demand. At the end of 1941, just after Pearl Harbor, the margin of reserve was 22%. Best available estimates today place the 1950 margin at 12% to 15.6%.



But this is only part of the story in the statistics. Electric power systems, both government and investor-owned, now have 65.6 million kw. This total will jump to 67.5 million kw by year's end as new equipment now being installed or soon to be delivered goes on the line. This compares with total utility capacity of 38.9 million kw in 1939 and 42.4 million kw in 1941.

Economic conditions account for the great disparity in old and current reserve margins. Utility systems and the rest of the economy—were recovering slowly from the so-called business "recession" in 1939. In spite of the defense and lend-lease programs, heavy industry, the great consumer of electric power, was not producing at capacity at the time of Pearl Harbor. In contrast, most industry was booming even before the Korean crisis.

Also favorable is the comparison of present and past expansion programs. With nearly two-thirds of its $9 billion postwar expansion program completed, the industry early this year still planned capacity additions totaling more than 10 million kw. New orders since January have increased the additions scheduled for the two years, to as much as 12.5 millions, according to some estimates.


A GREATER EXPANSION PROGRAM
is under way. Bars show planned capacity addition (much of it on order) as estimated at beginning of this year and actual expansion during World War II.
Millions of kw
After 1950
1941
1942
1943
1944

Production schedules for these additions may be considered firm enough to compare them with actual additions of nearly 2.5 million kw in 1941, 2.6 million kw in 1942, and 2.9 million kw in 1943. Because of shortages, additions dropped off to 1.2 million kw in 1944 and to 922,000 kw in 1945. Thus,

1951-52 additions are likely to exceed the total capacity installed during the five war years.

Further, the industry enters the mobilization program with much high-efficiency, postwar generating equipment, as compared with the predominant old and uneconomic equipment of the '30's.

Even more promising was the current rate of production of generating and other heavy power equipment. New capacity was being produced at a rate of 500,000 kw per month. Industry experts estimated this rate could be boosted by 20 to 30%, in a real pinch, by further standardization of equipment. Also, actual installation of generating units could be speeded. Recently a major unit was installed and put into operation at a Midwest generating station in 27 days, as compared to the two or three months consumed when speed was no object.

All segments of the industry looked to Washington for further details on actual mobilization and industry controls. Clearly, military requirements would cut deeper into supply of steel and other essential metals. Expansion of selective service inductions would tap equally vital manpower. The industry hoped to do as well as it did in World War II when it attained high priority as an essential non-military industry.

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Central Maine Will Buy 30,000-Kw Steam Unit

Central Maine Power Co plans to buy a 30,000-kw steam turbine unit for the Mason station in Wiscasset. The new unit, scheduled for service in the latter part of 1952, will raise plant capacity to 70,000 kw and will complete a 3-unit installation.

The utility's gas turbine installation at the Farmingdale steam plant has been completed and is ready for operation. The unit has an effective capacity of 4,000 kw.

A 6,000 kw hydro unit, to be installed at the Williams station on the Kennebec River at Solon, is scheduled for completion before 1951.

With the completion of this year's program the total rated capacity of Central Maine's 35 hydro stations will be 191,325-kw. Its nine fuel-burning plants have a total capability of 108,242 kw.

Utilities Speed Capacity Expansion; Sporn Sees Ample Power Supply

FOLLOWING THE EXAMPLE of several of its leaders, the electric utility industry last week stepped up its capacitiy expansion program. The industry had two objectives: To make sure it had more than enough capacity to meet possible added demand stemming from mobilization, and to get work scheduled on generating units before possible metal shortages slowed production of equipment.

Some companies, like Cleveland Electric Illuminating, announced they would start construction of new plants. But chiefly the utilities concentrated on placing orders for generating units.

Until the start of the Korean crisis, manufacturers had considerable production capacity open for 1952. Last January ELECTRICAL WORLD's Statistical Issue indicated utilities had placed orders for only 2,046,000 kw of the 5,277,000 kw of capacity they planned to install in 1952. By the end of last week most of this capacity—and more—had been ordered for 1952, and manufacturers were getting substantial orders for 1953.

Typical of the industry's concentration on capacity additions was the announcement by the American Gas & Electric Co that it had advanced installation dates for units at two plants. The advances aim at addition of the third and fourth 150,000-kw units at the Philip Sporn plant of Ohio Power Co and Appalachian Electric Power Co in May and December of 1951. The first 150,000-kw machine at Indiana & Michigan Electric Co's Tanners Creek plant was rescheduled for June, 1952, instead of December of the same year. The Sporn plant units originally were scheduled for July, 1951, and May, 1952.

In Cleveland, CEI announced it would begin construction immediately on the new, $100-million Eastlake plant. Initial installation of 125,000 kw of capacitiy is slated to be completed in early 1953. Ultimate capacity of the plant will be 1 million kw.

American Gas & Electric also is reviewing its 1953 expansion plans. President Philip Sporn announced. Just returned from the World Power Conference in London and a tour of European power facilities, Sporn emphasized the contrast between power supply in his country and abroad.

While Europe is suffering from a power shortage, he noted, the U. S. has sufficient generating capacity to meet demands "not only for an enlarged defense program, but to continue civilian production at a high rate."

He said he saw no immediate need for controls affecting the utility industry other than for materials and manpower that will be needed as production is accelerated. "As our defense and rearmament program develops, I would expect and hope that machinery for handling the power program, similar to that used so effectively in the last war, would be set up and put into operation," he added.

If the government will help in providing the necessary manpower and materials for utility construction programs, Sporn predicted, the electric companies will have "sufficient capacity to meet any immediate demands that industrial mobilization will make on them."

Want to Be a Cook?

Members of the Power Engineers Association, New England utility sales group, have been invited to take a commercial electric cooking course. The one-week course, beginning Sept 11, will be conducted at the Restaurant Institute of Connecticut in New Haven. Other utility employees may enroll. E. B. Haskell, commercial manager, United Illuminating Co, New Haven 6, Conn., is in charge of registration.

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Duke Will Add Unit

Duke Power Co will add a 100,000-kw unit to its River Bend Plant near Charlotte, N. C. When the unit is complete in April 1952, the plant will have a capacity of 265,000 kw.

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Allocations Expected Initially on 3 Metals

Editor's Note: While industrial controls had not yet been approved by Congress as this was written, Washington was shaping plans for them just the same. The following article describes the way in which the Government expects to use whatever authority it finally gets to allocate critical materials. Washington thinking apparently contemplates initial allocation of rubber and only three basic metals —aluminum, copper and steel.

Industrial allocations will come first on rubber, copper, aluminum, and steel, in about that order.

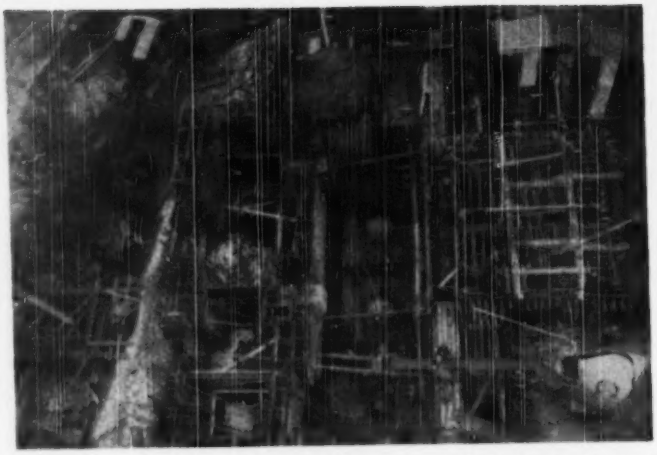
Allocation of rubber may be only temporary, however, pending completion of current plans to raise synthetic production above the 600,000 ton-a-year mark. Even after December, when that goal is reached, it may still be necessary to continue allocation of natural rubber supply, since both Russia and the U. S. strategic materials stockpile compete with industry for available supplies.

Allocation of copper—stepped-up defense needs will take another 100,000 tons a year, even without considering additional arms aid requirements—will be longer term. Copper control probably will continue for the duration of the present emergency. Copper allocations are expected to control zinc indirectly through brass production.

Accelerated aircraft production will bring aluminum allocations. The three major U. S. producers already have started voluntary allocations on their own. Government controls will follow quickly. Again excluding demands for military aid to other nations, new arms procurement for the U. S. alone will take an additional 130,000 ton bite out of annual supplies.

Instead of the 1.5 million tons of steel that defense buying took last year, the military will now require at least 5-million tons. That too means allocations. The steel industry right now is operating at close to 100% capacity and couldn't meet all demands even before Korea. The industry is adding 6.5 million tons of capacity, which should come fairly close to meeting demands sometime next year, assuming there's no big increase in present procurement plans. Meanwhile, steel, like aluminum, already is being allocated by the industry to its civilian customers.

Lead and zinc requirements for mobilization will take 8% and 11%, respectively, of annual U. S. supplies, but there are no plans now for putting these metals under direct controls.



MONTAUP ELECTRIC CO's 60,000-kw additional steam unit at the Somerset, Mass., station, calls for unusually deep supporting construction. The plant was designed by Stone & Webster Engineering Corp. Excavation work for the condensing water intake through a temporary man-made earth fill promontory built into the Taunton River is shown at right

Interior Favored for Power Control As Congress Debates Mobilization

ELECTRICAL ENERGY was a big question mark in a watchful, waiting Washington last week as Congress debated mobilization powers for the President.

At midweek no assignment of electric power controls had been made. Best bet continued to be that Interior would serve as claimant agency to pass on requests for steel and other allocated materials for the power industry.

If Interior gets the job it will set up a new office and establish a power advisory group similar to the oil industry's National Petroleum Council and Interior's National Minerals Advisory Council. A staff drawn in large measure from federal power agencies would handle power problems, aided by an advisory group, including representatives of the electric utility industry.

Another development emerged last week. Fair Dealers renewed the drive for some of their pet federal power schemes on the basis of defense needs.

In a press conference dominated by questions of mobilization and war, President Truman again pointed an accusing finger at New England for being the only region without federal power development. He said he waited on his water resources policy commission's report—due Dec 1—before making any recommendations.

In Pendleton, Ore., a new cry to establish a Columbia Valley authority in the interests of defense was sounded by Assistant Interior Secretary C. Girard Davidson. He said aluminum plants can't expand production in the Northwest because of a power shortage.

The big federal-power-for-defense push will come later, however. Federal power agencies last week were informally checking their programs to see which projects under construction could be speeded up to bring in power sooner and which new projects could be urged as defense power measures. But this activity still did not have White House approval and may come to nothing.

Meanwhile, Congress attacked the President's Defense Production Bill from both sides. Powers to set up price controls, freeze wages, and establish rationing were urged by some critics who said the bill didn't go far enough. Others wanted curbs on the powers which the President asked. It looks as though the Chief Executive would get more power than he requested, but would not use some of it for the present. November election considerations were important in Congress. Both parties wanted credit for the mobilization but no blame for high prices.

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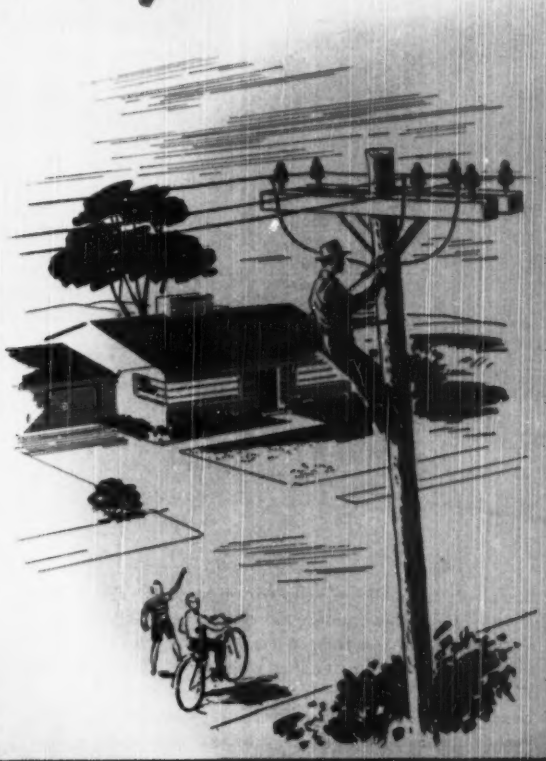

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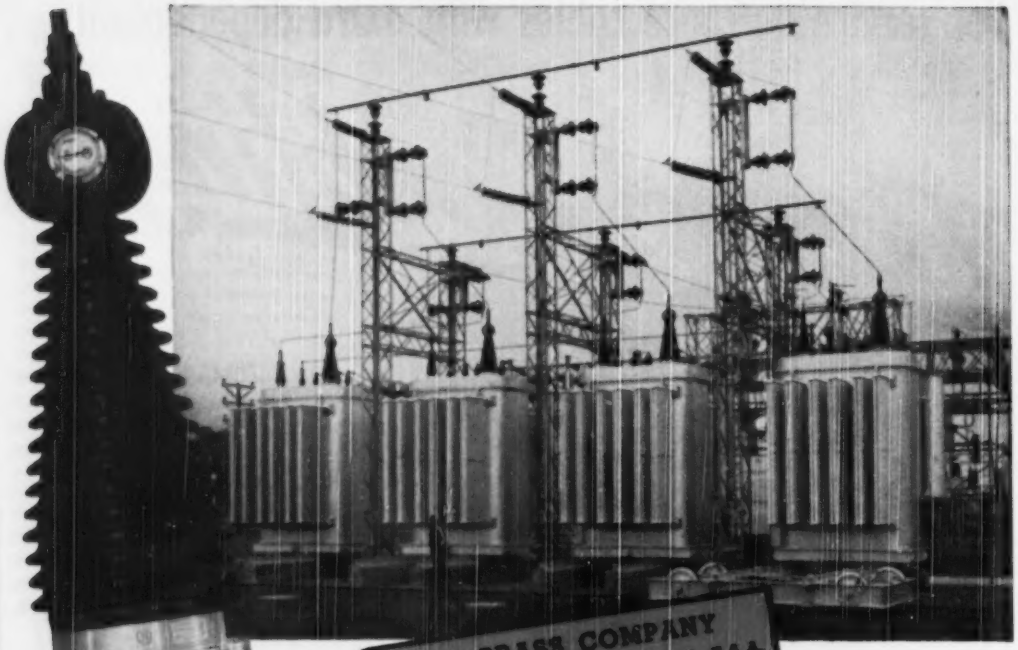

Installed in a large western substation, these four Moloney autotransformers are each rated at 15,000 kva, and step down the transmission voltage of 112,500 to 60,000. Each has a tertiary winding of 6,667-kva capacity at 10,500 volts for operation of a synchronous condenser. The inert gas pressure system for oil preservation contains three-stage pressure regulating equipment. Tanks are designed to withstand full vacuum without oil. And like many other Moloney transformers, these are equipped with . . .

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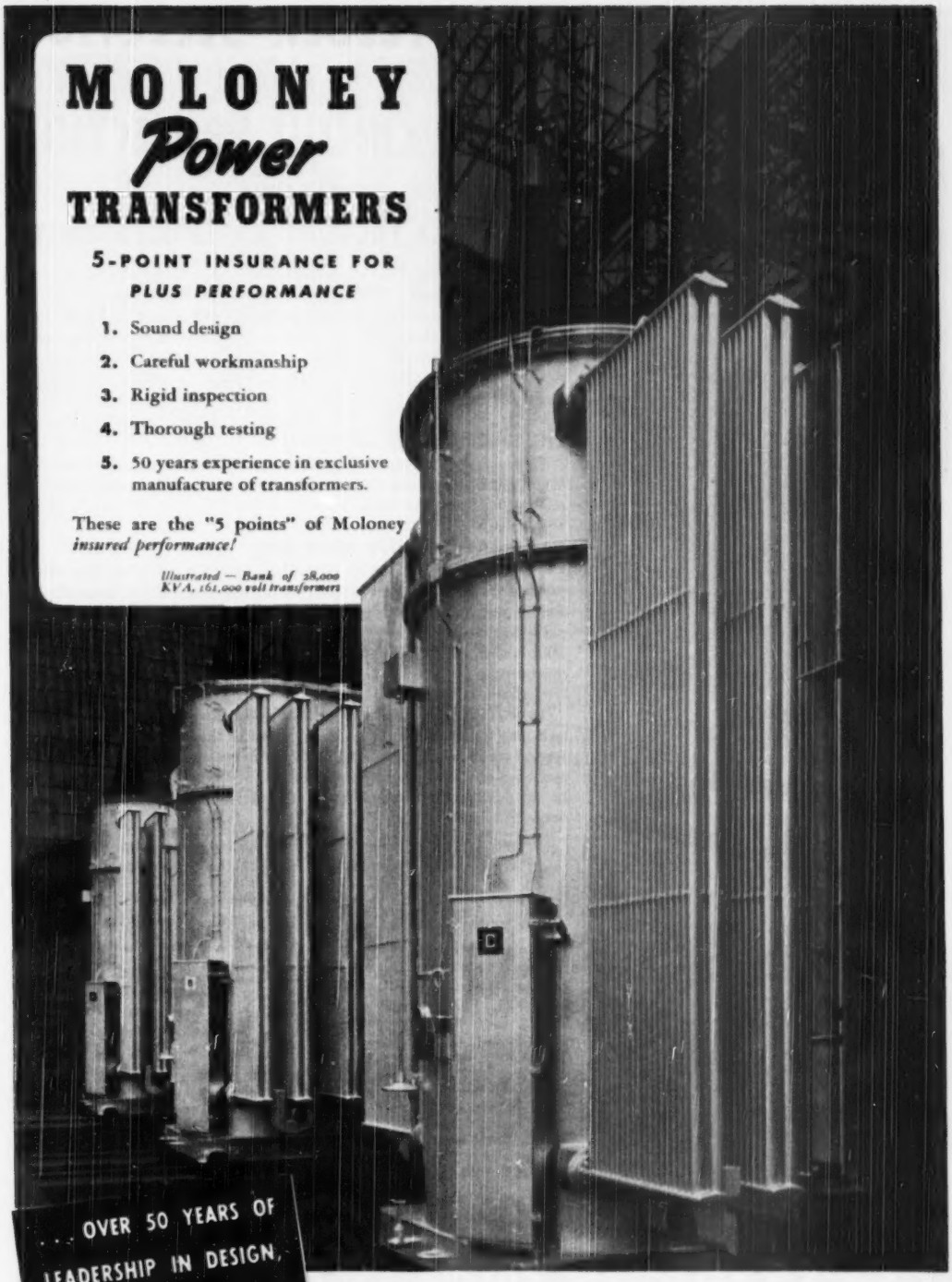

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SHORT CIRCUIT PROTECTION

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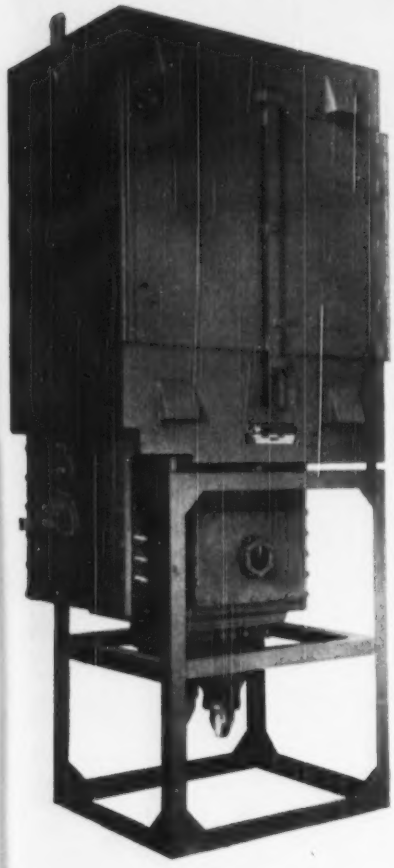


In the Type "SC-RAD" combination fuse-switch unit a load-break oil switch, automatic feeder transfer mechanism and fuse cabinet are used to form a multipurpose device which will economically perform functions otherwise requiring much more costly sectionalizing equipment. With the proper combination of standard G & W sectionalizing devices you gain savings in installation time, installation labor, and equipment cost.

SHORT CIRCUIT PROTECTION

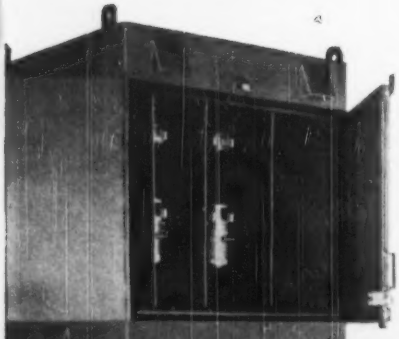
Power fuses in upper cabinet protect feeders against heavy short circuit currents on the load circuit. High interrupting capacity insures prompt and positive action.

AUTOMATIC FEEDER SELECTION

Type "RAD" load break oil switches supply one load from either of two feeders and an automatic transfer mechanism operates the switch to quickly transfer load to the alternate feeder whenever the preferred source fails. The unit shown here uses a Type "RAD" double throw switch for duplicate feeders and a Model "A" transfer mechanism for automatic throwover to emergency feed and manual throwback to preferred.

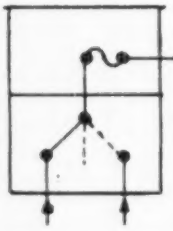
Type "SC-RA" fuse-switch units are furnished with other "RA" switches for loop circuit connection and other transfer mechanisms for fully automatic operation on both throwover to emergency feeder and throwback to preferred. Type "FC" oil fuse cutouts may be used in place of power fuses where lower interrupting capacities are adequate.

Write to G & W or your G & W engineering representative for further information on the combination fuse-switch unit best fitted to your requirements.



Type "SM" Power Fuses

Simple, rugged, refillable fuses are furnished in various ratings up to a maximum interrupting capacity of 30,000 amperes R.M.S. at an operating voltage of 13.2 Kv. (400 ampere continuous carrying capacity). Fuse cabinet doors are key interlocked with oil switch operating lever.



Type "RAD" Double Throw Load Break Oil Switch with load circuit protected by Type "SM" Power Fuses.

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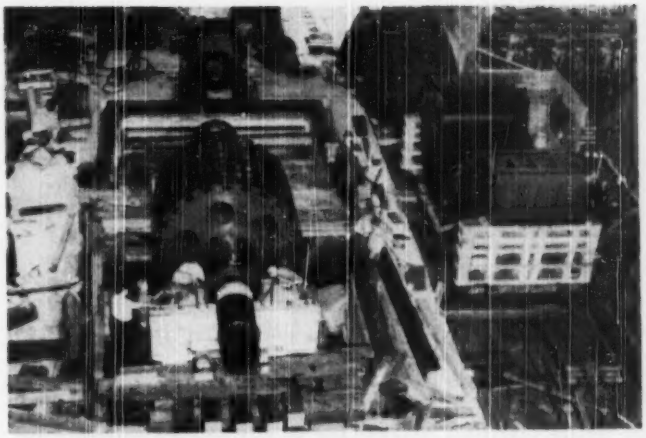


TO PERMIT INTERCHANGE between Boston Edison's 60-cycle "L" Street Station and the 25-cycle "O" Street plant of the Metropolitan Transit Authority, a 40,000 kw frequency changer is being installed, above, at the BE plant. When completed this fall the tie will take advantage of peak diversity between systems, utilize reserve capacity

University Planning Own Atomic Reactor

The world's first privately financed atomic reactor is being planned by the University of North Carolina in cooperation with the Atomic Energy Commission. AEC's eighth semi-annual report last week disclosed the university wants to construct a low-power reactor at no cost to the government.

University personnel are being cleared for security so they can make studies at Oak Ridge National Laboratory in preparing a formal proposal to AEC. The proposed reactor would be used for research at the university. AEC said, "such initiative is welcome and encouraging."

Cost of the research unit may be in the neighborhood of $1 million. AEC is financing investigations by North American Aviation Corp to develop a design for a low-power research reactor which would cost about $1 million to build.

AEC also reported the first detailed cost estimates for construction and operation of plants using radioactive materials. The estimates covered a processing operation, but they gave some clues to the probable costs of building nuclear power plants.

Capital investment in a hypothetical processing plant using radioactive material would be 1,100% greater than a similar plant without radiation hazards, AEC said. Annual operating expenses would be 177% greater.

AEC pictured a processing plant costing $1 million, with annual operating expenses of $747,000. The same process carried on with radioactive materials would require a plant costing $12,170,000, and annual operating costs would total $2,067,000.

A plant costing only $27,000 would be ample for work with non-radioactive materials, while $1,383,000 would be the cost of a massive concrete structure to shield against radiation. Processing equipment cost would jump from $103,000 to $4,332,000 with radioactive materials. In operations, 64% of the total operating expenses of a plant dealing with radioactive materials would be "incurred solely because it is necessary to provide radiation protection." Depreciation would be $1,217,000 annually, or more than the total cost of constructing a comparable non-radioactive plant.

Although progress has been made in dealing with radioactive hazards, AEC concluded, "at best, radiation protection promises to remain costly." But AEC's provisions for radiation protection have proved highly effective. Only five radiation injuries, no deaths, have been reported in the atomic program since January, 1947. Two deaths and eight over-exposures occurred before then.

•

Hydro Project Postponed

The British Columbia Power Commission will construct a diesel-electric generating plant, costing $88,000, this summer at Lillooet, B. C. The proposed development of a hydro-electric project at Cayoosh Creek to serve the area has been postponed because of prohibitive cost in relation to consumer demand.

FPC Restricts Sale of Some Utility Maps

Federal Power Commission maps and other documents disclosing locations of electric and gas facilities have been classified "restricted" and will not be sold to the general public.

Prompted by the Korean crisis, FPC withdrew maps from public sale July 27. "Restricted" is the lowest grade of government and military classification and simply limits distribution of material to authorized persons.

The action was taken under the commission's authority to issue rules and regulations it finds necessary to carry out provisions of the Natural Gas Act and Federal Power Act. The classification is administrative, not based on national security—the latter would require special authority. But it adds up to the same thing—not everybody will have access to FPC maps.

The new restrictions apply only to commission publications showing locations of facilities. Statistical reports and other documents containing no maps will continue on general sale as usual.

Persons in the electric or gas utility industries will have no difficulty in obtaining publications now classified. They will be expected, however, to observe the "restricted" designation and take precautions against use or acquisition of the publications by unknown persons. The same care should be exercised by persons now having copies of recent maps and publications coming under the new classification, but no effort will be made to investigate purchases made before the new ruling.

New orders for maps will be screened by the commission staff, largely on the basis of previous contacts and correspondence. There will be no forms to file, but it may help to indicate what use is to be made of restricted matter ordered, FPC officials said.

In cases of doubt, such as orders from persons unknown to the commission, the orders will be turned down.

FPC will continue to issue new maps and other publications. But those showing facility locations will be restricted in distribution.

Thus far no formal commission order has been issued, and officials said that the new policy on distribution of publications may be revised upon further study.

•

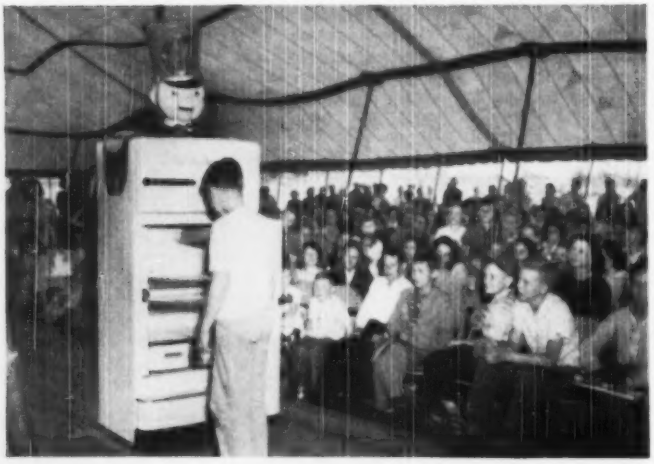
Wins Franchise Renewal

Iowa Public Service Co has been granted a 25-year renewal of its franchise by the residents of Panama.

LIKE A CIRCUS is the "Home and Farm Electrical Exposition" of the Tennessee Valley Public Power Association. But the exposition has brought to the rural areas the story of electrical living and of advantages of using electricity on the farm to make work easier

Selling Appliances in the Tennessee Valley Easy at Road Show

Public Power Association Sends Caravan on 6-Month Tour of TVA Area; Shows and Entertainment Bring in Buyers from Rural Sections

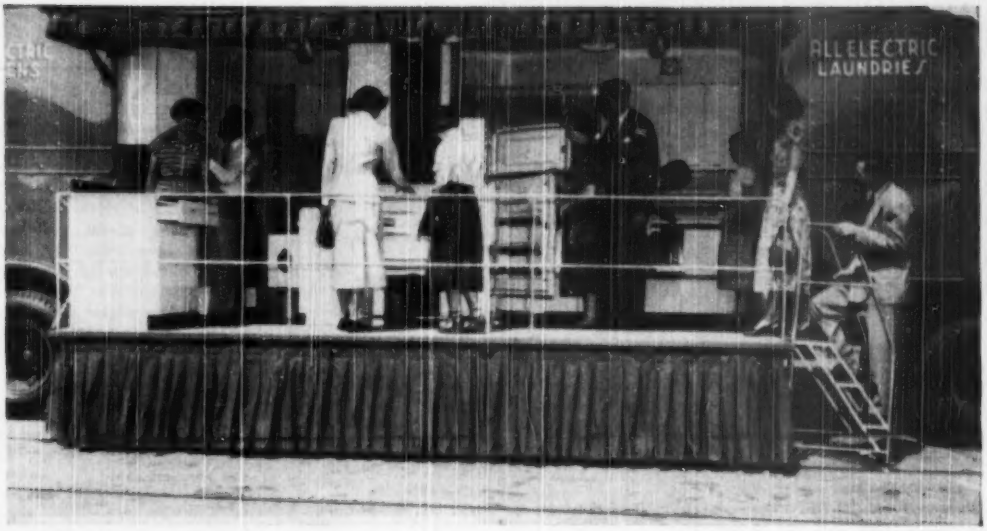


"HAVE A LOLLYPOP," says "Junior," the walking-talking refrigerator, to one of the younger members of the audience. The children aren't buying appliances today but they will

IT'S EASY TO SELL electrical appliances in the Tennessee Valley. This is especially true for the dealers and manufacturers who are accompanying the Tennessee Valley Public Power Association's traveling electrical caravan. The caravan is now touring the Tennessee Valley area, bringing the color of big city electrical shows to the smaller communities and rural areas.

Predictions are that at least 400,000 people will see the exposition during its visits to 50 towns in Alabama, Tennessee, Kentucky, and Mississippi. This is a "Home and Farm Electrical Exposition," and it has been drawing record crowds of homeowners and homemakers and of farmowners and farmers. The exposition opened May 4 at Sheffield, Ala., and will close the season Nov 1 at Centre in the same state.

Cooperating with the association are electrical appliance manufacturers, distributors, and dealers, and the Tennessee Valley Authority. The exposition



TRAILER displaying electrical kitchen and laundry equipment is being used by this manufacturer to tell his story to the public. Many other manufacturers are using the same technique because when opened up in the midway the trailers make easily accessible showrooms

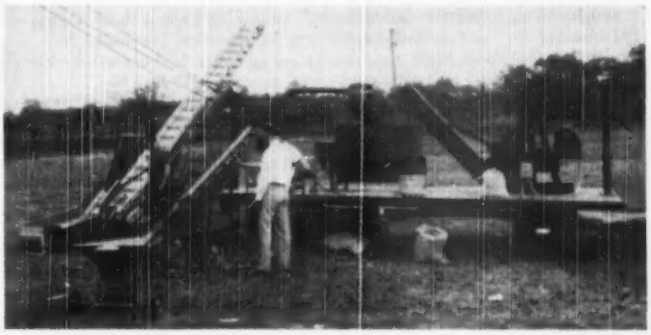
is financed entirely through payments from the manufacturers and from sponsoring power distribution systems.

Designed to entertain and educate all users of electricity—industrial, commercial, farm, and home—the exposition is the biggest showing of its kind ever assembled in the Tennessee Valley. Its array of tents, trailers, and other equipment covers five acres. There are two tents 60 x 160 ft, three smaller tents, and 15 trucks and trailers. One "big top" serves as an auditorium seating 2,000 persons.

A two-hour stage show is presented in this tent. The program consists of a non-technical show outlining many recent developments in scientific research, a walking-talking refrigerator, and at the night performances a black light demonstration. An appliance manufacturer presents a puppet show. TVA home economists present skits showing the advantages of the home freezer and of electric cooking.

The other large tent houses an extensive display of electrical appliances by manufacturers and local dealers. Some manufacturers have trailers on the midway. One manufacturer has a talking kitchen on display.

On the midway is an electrified farm. This features a meter pole installation, feed grinding and processing, farm elevators, a model dairy, electrical equipment used in poultry raising, a farm workshop, and an automatic electric water system. All of these exhibits are in operation. TVA agricultural engineers conduct regular displays of this equipment and explain how such equipment can make farm chores easier and farm life more attractive.



AGRICULTURAL engineers give a demonstration of feed grinding and elevating as a part of electrified farm setup. They also tie in the numerous farm uses of electric motors

The entertainment is supplied by an organ and a hill-billy band. Top clincher in drawing the crowds is the prizes which every one has a chance to win.

Those participating are certain that the show is a big success. They point to the sales of electrical appliances which have been going up ever since the exposition took to the road.

•

Gets 25-Year Franchise

Public Service Co of Oklahoma has been granted a 25-year franchise by Adair.

TV Maker Will Sponsor College Football Games

H. L. Hoffman, president of the Hoffman Radio & Television Corp, Los Angeles, will sponsor 30 Pacific Coast conference football games in Los Angeles, San Francisco, and Seattle during the 1950 season. He guarantees to make up the difference financially if attendance drops below the agreed figures, the first money-backed claim that TV won't hurt gate receipts.

Hoffman is hopeful that through this guarantee a successful method of telecasting sports can be achieved—and looks to this fall test to solve TV-sports problems in other sections.

YIELDS (%) — Operating Electric Utility Securities

Quality	Bonds			Preferred Stocks			Common Stocks		
	1st	2nd	3rd	1st	2nd	3rd	1st	2nd	3rd
DATE									
1950									
July 27	2.62	2.65	2.75	3.83	4.05	4.40	5.87	6.89	7.83
July 20	2.63	2.66	2.76	3.89	4.04	4.39	5.68	6.69	7.69
END OF QRT.									
2nd 1950	2.68	2.66	2.74	3.79	4.03	4.38	5.38	6.51	7.50
1st 1950	2.59	2.61	2.74	3.78	4.01	4.36	5.98	5.85	6.67
4th 1949	2.59	2.61	2.72	3.95	4.06	4.46	5.37	6.15	7.01
3rd 1949	2.61	2.63	2.77	3.88	4.15	4.54	5.55	4.67	7.51

Data: Reis & Chandler, Inc.

SEC Okays Fresh Start on Standard G&E Plans

Withdrawal of all pending plans for reorganization of Standard Gas & Electric Co has been authorized by the Securities and Exchange Commission.

Conditions have changed since SEC approved the holding company's 1944 amended plan and the record upon which that approval was based "has become stale," the Commission said. "Consequently, a fresh start is necessary."

Standard; its principal subsidiary, Philadelphia Co; and a Philadelphia subsidiary, Duquesne Light Co, now propose refunding of certain security issues as part of Philadelphia Co's simplification.

They have asked permission to refund Duquesne's outstanding 5% preferred stock and for Duquesne to sell $27.5 million par amount of new perferred to Philadelphia. Philadelphia would use the new Duquesne preferred to retire its own 6% non-callable preferred.

The plan would leave Philadelphia with only its common stock and $17.5 million to be borrowed from banks. Duquesne would have refunded its preferred and raised funds for its 1950 construction program.

•

New Hampshire Electric Files Refinancing Plan

New Hampshire Electric Co, Cambridge, Mass., (formerly New Hampshire Gas & Electric Co) has filed a refinancing proposal with the Securities and Exchange Commission designed to let New England Gas & Electric Association dispose of its holdings in the subsidiary by Sept 1, 1951. The proposal also is aimed at improving the salability of the subsidiary's common stock in preparation for independent operation.

Under the plan New Hampshire Electric would issue 15,000 shares of $4.50 $100-par preferred and 140,000 shares of no-par common in exchange for the 150,000 shares of no-par common now outstanding, all of which are held by New England G&E. The subsidiary also would sell $3.6 million of first mortgage sinking fund bonds, due 1975. Proceeds would be used to retire bonds and bank notes and for construction.

•

Deepwater Plant Sold to Atlantic City Electric

Deepwater Light & Power Co has sold its portion of the Deepwater, N. J., generating station to Atlantic City Electric Co for $6.2 million.

The plant has been jointly owned by the two utilities since 1930. Acquisition of the entire property will give Atlantic City Electric a total capacity of 235,000 kw. The purchase was financed by sale to institutions of $4.6 million of first mortgage bonds and $2 million of preferred. The excess proceeds will be used to increase inventory.

•

California Oil Prices Up

Standard Oil of California has increased its selling price for heavy fuel oils by 10¢ a bbl. The increases apply to the type of fuel oils used by power plants and heavy industry generally. Standard Oil's buying price for 14 deg gravity crude oil has been raised by 10¢ a bbl. Smaller increases will be made for other gravities up to 25 deg gravity.

•

Cook SEC Vice Chairman

Donald C. Cook has been elected vice chairman of the Securities and Exchange Commission for the fiscal year ending June 30, 1951. The position has just been established by the Commission. Cook joined SEC last November to fill a term expiring in 1954.

FINANCIAL BRIEFS

Georgia Power & Light Co has been ordered to find out why it is not saving $592,000 a year. The Georgia Public Service Commission has asked the utility to show why its rate shouldn't be reduced because of a new wholesale contract with the parent company, Florida Power Corp. The PSC said the new agreement should save the utility $210,000 annually and that lower fuel oil prices should add $382,000 a year to the reduction. The company said its books showed no such savings.

Securities and Exchange Commission hearing has been scheduled for Aug 15 on New England Public Service Co's application to sell 260,000 shares of its holdings of the common stock of Central Maine Power Co. Nepsco now owns 1,315,181 shares, or 60.4%, of the Central Maine stock. Net proceeds would be applied to the reduction of outstanding Nepsco notes.

The Missouri Public Service Commission has okayed Union Electric Co of Missouri's proposed purchase of electric distribution facilities in St. Francis County for $16,300. The property will be bought from Doe Run Delassus Light & Power Co, Farmington.

The Federal Power Commission has authorized sale by Community Public Service Co, Fort Worth, Texas, of its electric facilities in Kentucky (EW, April 24, p 88). Purchasers will be Kentucky Utilities Co, Lexington, and Union Light, Heat & Power Co, Covington, Ky.

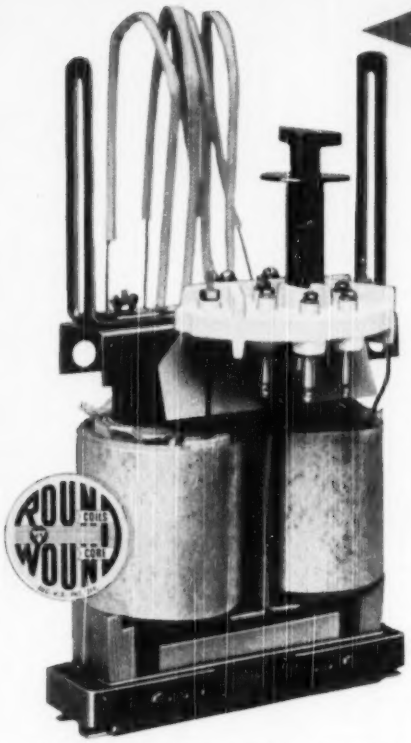
Narragansett Electric Co, Providence, R. I., has received Federal Power Commission authorization to acquire all the assets of its subsidiary, Rhode Island Power Transmission Co (EW, June 12, p 14).

An increase in municipal power rates in Moultrie, Ga., has been declared null and void by the superior court there. The city was enjoined from collecting the higher rate. The resolution raising the rates, passed by the city council at a special session, had been called illegal by a group of some 350 residents.

A $3.5-million bond issue has been approved by voters of the Salt River Power District in Arizona. Proceeds will be used to retire a $2.5-million bank loan and to expand the Tempe steam plant.

to make 3's and 5's out of 1½ kva transformers

... L-M's "UNIVERSAL" core-coil assembly



L-M Round-Wound "Universal" core-coil replacement assemblies are completely dried, impregnated, and shipped in moisture-tight containers. For immediate delivery from warehouse nearest you. 3 and 5 kva, 2400, 4800, 7200 and 7620 volts; fit all makes of tanks, from 1½ kva up. Same high quality characteristics and cooling as complete L-M Round-Wound transformers.

You can make 3 and 5 kva transformers out of your present surplus or overloaded 1½ kvas, easily, economically, with L-M's new "universal" core-coil assemblies. These fit practically all 1½ kva tanks of any make, and can be installed in your own shop, or by one of the L-M-Authorized Transformer Service Shops.

These "universal" core-coil assemblies are Round-Wound design, with all the advantages this design offers in exceptional cooling and other performance characteristics. Both 3 and 5 kva sizes come in 2400, 4800, 7200 and 7620 volts.

Use these L-M Round-Wound core-coil assemblies for quick replacement in emergencies, burnouts, or in the routine business of making big ones out of little ones when 1½'s no longer give your customers enough of what you sell.

They are available from stock in L-M factories or at any of the 45 L-M warehouses throughout the country; or for installation by L-M-Authorized Service Shops.

For details, installation instructions, specifications, ask the L-M Field Engineer or write Line Material Company, Transformer Division, Zanesville, Ohio (a McGraw Electric Company Division).

Some of the L-M-AUTHORIZED Transformer Service Shops

It is not necessary to send transformers to the Zanesville Plant—except for those in the Zanesville area. L-M's nearest Authorized Transformer Service Shop will give you dependable service.

Daley Electric Company
960 East Van Buren Street • Phoenix, Arizona

Dowzer Electric Machinery Works, Inc.
First and Castleton Streets • Mount Vernon, Illinois

Electran Company
4546-50 N. E. Alberta Street • Portland 13, Oregon

Interstate Electric Company
South 5th and E Street • Fort Smith, Arkansas

Jones Electric Repair Company
715 East 7th St. • Charlotte, North Carolina

Larsen-Hogue Electric Company
11510 South Alameda Street • Los Angeles 2, California

Southwest Electric Company
2617-21 South Agnew • Oklahoma City 8, Okla.

Line Material Company Plant
Zanesville, Ohio

For dependable transformer service...

L-M-Authorized Service Shops provide complete equipment for repairs, genuine Round-Wound rewinding, and all necessary testing facilities.

7

LM

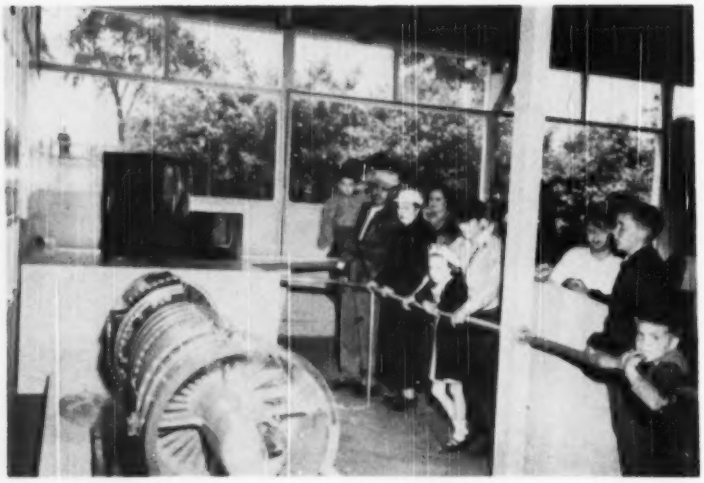
LINE MATERIAL... Transformers

Complete Coordinated Equipment for Distribution Today

FOUR UTILITY COMPANIES are exhibiting in this building. Demonstrations include those of equipment used for irrigation, dairying, barn chores, and poultry raising as well as of power tools

SENSATION of the exhibit of the utilities w from the ground and tosses it through the d

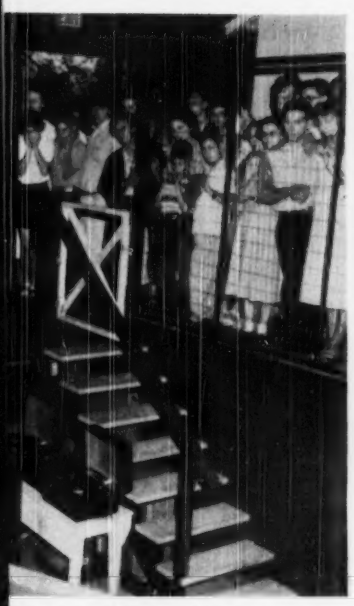
The Chicago Fair of 1950



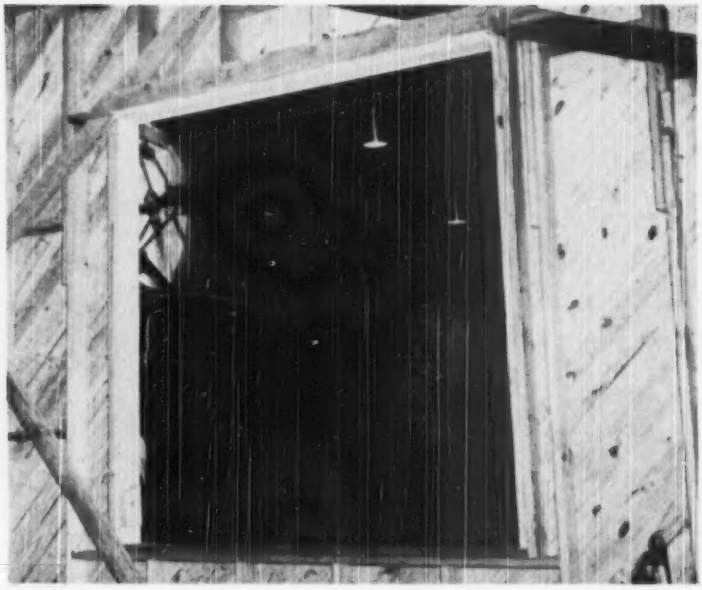
CUTAWAY model of a jet engine, operating slowly, makes it very easy for the representative of Westinghouse Electric Corp to explain to the visitors the operation of this new prime mover

THE ELECTRICAL INDUSTRY is takin advantage of the Chicago Fair of 195 to tell its story to the million or mor persons who will attend it this summer Commonwealth Edison Co, Public Serv ice Co of Northern Illinois, Western United Gas & Electric Co, and Illinois Northern Utilities Co are the four electri utility companies participating. One o the big exhibits of manufacturers i that of Westinghouse Electric Corp. Al of the exhibits mix education and infor mation with showmanship. Commer cialism takes second place. Audience reaction (attendance has been high) has been favorable.

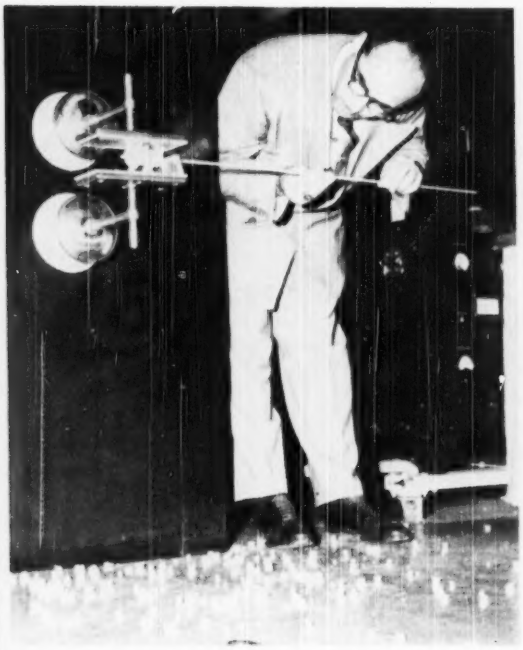
Because the Midwest from which mos of the spectators come is an important agricultural area, use of electricity on the farm is stressed. But such applica tions as adequate wiring, efficient home appliances, and modern lighting have no been forgotten by the various exhibitors.



this bale gun. The gun picks up a bale of hay into the hayloft. Here the bale is in the air



THROUGH the loft door goes the bale of hay shown in the preceding picture. Between the demonstrations, crowds were gathered and entertained by the music of a "genuine" hill-billy band

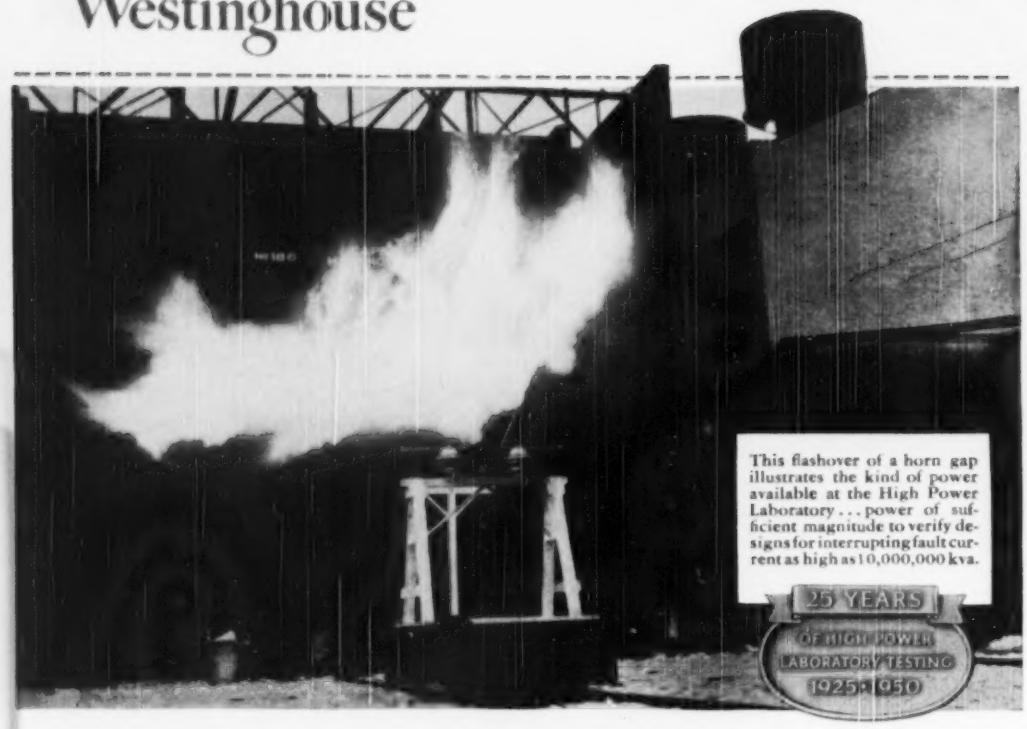


CORN popped on the cob which has been placed in a high-frequency field is one of the attractions at the stunt show sponsored by the utilities

50,000-kw LAMP was another exhibit at the stunt show which always plays to capacity houses. Show brings out facts about the industry

YOU CAN BE **SURE**.. IF IT'S

Westinghouse


This flashover of a horn gap illustrates the kind of power available at the High Power Laboratory . . . power of sufficient magnitude to verify designs for interrupting fault current as high as 10,000,000 kva.
25 YEARS
OF HIGH POWER
LABORATORY TESTING
1925 • 1950

Here's *SURENESS*... in the Making!

Sureness doesn't spring from skillful engineering and quality manufacturing alone. It takes testing, too . . . rigid design testing on a scale equaling the severest kind of service conditions. Fault currents of tremendous magnitude, sub-zero weather, severe icing conditions, searing flashovers . . . these are only a few of the tests given every new Westinghouse design.

This business of making *sure* . . . of anticipating and duplicating every conceivable service condition, is the work of the Westinghouse High Power Laboratory . . . for 25 years the proving ground for all Westinghouse electrical apparatus. This is where we make *sure* . . . and this sureness is passed along to you. It backs up every Westinghouse label, whether it appears on a tiny switch, a giant circuit breaker or the world's largest lightning arrester. J-60697

SEE FOR YOURSELF!

Booklet B-4383 describes facilities, procedures and actual tests conducted at the Westinghouse High Power Laboratory. Ask your Westinghouse representative for a copy of B-4383, or write Westinghouse Electric Corporation, P.O. Box 868, Pittsburgh 30, Pa.

Westinghouse

HIGH-POWER LABORATORY

Canadian Output Soars; Primary Use Also Up

Two records were set in May by Canadian central stations. Output was 4,417,089,000 kwhr. The old record of 4,271,027,000 kwhr was set in May 1949. Primary consumption reached 3,795,470,000 kw hr and toppled the mark of 3,791,553,000 kwhr set in March. May is usually the high month of the year for Canadian power production but not necessarily of primary consumption.

Gross power exports to the United States have been rising steadily since last November. The May total of 199,351,000 kwhr was the highest recorded since July 1947. But previous to that time exports to the U. S. frequently topped the 200-million kwhr in a month.

The following statistics supplied by the Dominion Bureau of Statistics are in thousands of kilowatt hours:

Period	1950	1949
Five Months' Output	20,493,814	19,444,285
Primary	19,067,160	17,798,404
Secondary	1,431,634	1,645,881
Primary Consumption	18,434,481	17,225,951
Net Exports to U. S.	845,008	828,684
May	4,417,089	4,271,027
Primary	3,933,342	3,711,627
Secondary	483,474	559,600
Primary Consumption	3,795,470	3,587,721
Net Exports to U. S.	199,275	184,066
April	4,061,915	4,150,340
Primary	3,781,061	3,636,575
Secondary	280,854	513,765
Primary Consumption	3,647,810	3,517,666
Net Exports to U. S.	190,595	179,298

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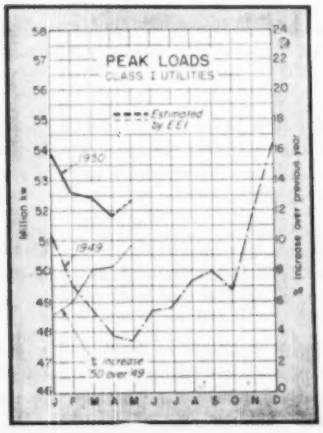
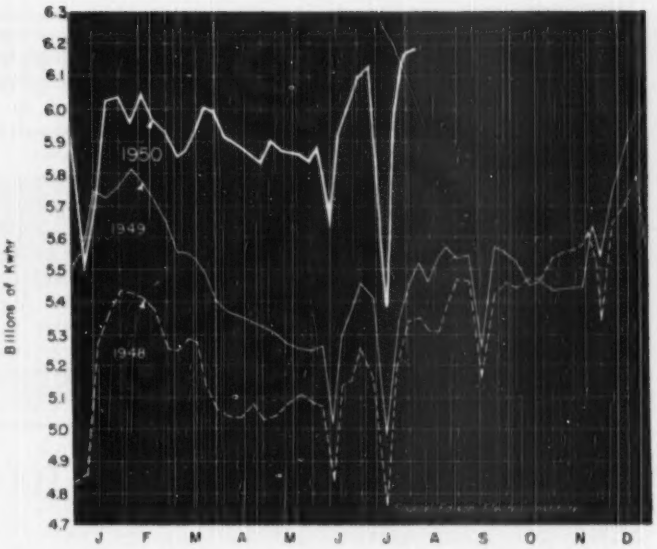
Utilities Interchange Power

New facilities permitting an interchange of 100,000 kw of power between Consumers Power Co and Detroit Edison Co have been put into operation. They were constructed to reinforce electric service in Jackson, Adrian, Manchester, and other southern Michigan communities. A 50,000-kw interconnection between the two systems has been maintained since 1928.





Output Week Ended July 29—6,190,098,000 Kwhr

Weekly Output, Millions Kwhr

1950	1949	1948
July 29 6,190	July 30 5,518	July 31 5,352
July 22 6,186	July 23 5,462	July 24 5,342
July 15 6,006	July 16 5,342	July 17 5,197
July 8 5,380	July 9 4,982	July 10 4,760
July 1 6,115	July 2 5,410	July 3 5,166
June 24 6,102	June 25 5,466	June 26 5,257
June 17 6,012	June 18 5,373	June 19 5,159
June 10 5,921	June 11 5,300	June 12 5,132
June 3 5,632	June 4 5,018	June 5 4,845
May 27 5,894	May 28 5,270	May 29 5,076

Percent Change from Previous Year

	July 29	July 22	July 15
New England	+12.2	+13.1	+14.7
Mid-Atlantic	+ 9.6	+10.8	+11.1
Central Industrial	+14.6	+17.2	+16.4
West Central	+ 9.6	+ 9.7	+10.3
Southeast	+14.3	+17.1	+13.9
South Central	+14.0	+11.9	+ 8.9
Rocky Mountain	+13.7	+11.1	+11.3
Pacific Coast	+ 9.2	+ 9.1	+ 9.0
Total United States	+12.2	+13.3	+12.4

MEETINGS

Illuminating Engineering Society
National Technical Conference, Hotel Huntington, Pasadena, Calif., August 21-24.

International Association of Electrical Inspectors
Northwestern Section, New Washington Hotel, Seattle, Wash., September 10-13.

Instrument Society of America
National Conference and Exhibit, Buffalo Auditorium, Buffalo, N. Y., September 11-15.

Northwest Public Power Association
Convention, Portland Hotel, Portland, Ore., September 13-15.

Conference and Exhibit
Sponsored by Instruments and Regulators Division of American Society of Mechanical Engineers and Instrument Society of America, Municipal Auditorium, Buffalo, N. Y., September 18-22.

American Society of Mechanical Engineers
Fall meeting, Hotel Sheraton, Worcester, Mass., September 19-21.

Public Utilities Association of the Virginias
Annual Meeting, Greenbrier Hotel, White Sulphur Springs, W. Va., September 22-23.

National Electronics Conference
Edgewater Beach Hotel, Chicago, Ill., September 25-27.

Canadian Electrical Manufacturers Association
Annual Meeting, General Brock Hotel, Niagara Falls, Ontario, Can., September 27-29.

Association of Edison Illuminating Companies
Annual Meeting, The Broadmoor, Colorado Springs, Colo., September 27-30.

National Television and Electrical Living Show
Chicago Coliseum, Chicago, Ill., September 29-October 8.

Pennsylvania Electric Association
Annual Meeting, William Penn Hotel, Pittsburgh, Pa., September 19-20. Transmission and Distribution Committee, Iron Temple Country Club, Dallas, Pa., October 5-6.

Indiana Electric Association
Annual Convention, French Lick Springs Hotel, French Lick, Ind., October 11-13.

International Association of Electrical Leagues
Annual Conference, Copley Plaza Hotel, Boston, Mass., October 11-14.

National Electrical Contractors Association
Annual Convention, Hotel Biltmore, Los Angeles, Calif., October 17-20.

National Farm Electrification Conference
Melbourne Hotel, St. Louis, Mo., October 18-20.

American Institute of Electrical Engineers
Middle Eastern District Meeting, Lord Baltimore Hotel, Baltimore, Md., October 3-5; Fall General Meeting, Shirvin Hotel, Oklahoma City, Okla., October 23-27.

*National Electrical Manufacturers Association**
Chalfont-Haddon Hall, Atlantic City, N. J., November 13-16.

* Addition this week.

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Heads S. Carolina PSC

Commissioner Charles A. Rice has been elected to a one-year term as chairman of the South Carolina Public Service Commission.

IN THE INDUSTRY

WILLIAM B. WHICHARD

PRESIDENT TRUMAN'S decision against a new War Production Board type of agency to allocate vital materials and equipment to mobilization production has created a considerable stir in industry circles.

Not that anyone felt there was immediate need for another WPB. But if it was time for standby controls, as Mr. Truman saw it, then it would also seem time to start blueprinting, at least, a standby agency that could effectively administer them.

Industry apprehension—and it spread far beyond the electric utilities—centered around the apparent alternative. Tossing a part of the allocations and priorities program to the Commerce Department and part to Interior and other agencies met little acclaim outside Washington. Even though, as some Administration quarters indicated, the actual controls were to be held in reserve as a sort of club to back up voluntary industry action.

It was beginning to look as if an all-out national emergency would find us in much the same position in regard to industry controls as we were at the outbreak of World War II. Then we wasted precious months while permanent federal agencies contested for portions of the job that WPB finally took over. And we'd have several competing agencies with what would amount to vested interests in the administration of large chunks of a necessary war controls program.

There can be little argument, and there has been none as yet, from industry as to the need to ready such controls. Several metals required for vital military and non-military production are in critical supply. Military needs in coming months almost certainly will create shortages. Whether we have time to try voluntary controls will be decided in Washington—or in Moscow.

But if we are preparing either for war or for a prolonged just-short-of-war mobilization effort, we will need something better than controls by permanent federal bureaus. That idea would not work in World War II. It won't work for any real emergency now.

Not the least of the hazards involved in even a temporary assignment of industry controls to permanent federal agencies is the impact on industry itself. Every established bureau has its own long-term programs, most of them touching upon some segment of industry. Interior competes with electric utilities, has some regulatory powers over coal and oil. In the past its representatives have clashed with elements of all three industries. To give the Department power, coal and oil controls, as has been proposed, would invite serious concern in those vital industries. True, Interior had a voice in fuel controls in the last war, but the independent, temporary WPB was the real arbiter.

It is inconceivable that President Truman, no stranger to war mobilization problems, will not come up with a more realistic control program if the crisis worsens. Nor is Congress likely to agree to sweeping controls on anything but an emergency basis. Industry meanwhile need not wait for the smoke of confusion to clear in Washington.

The electric utilities already have looked to their expansion programs. They have speeded up capacity additions and pushed plans for even more new plants. They can now—as some companies already have—prepare to meet new military demands by making definite plans for such loads. And they can be preparing to lend their manpower again, when and as needed by government. A formal program for support of the latter type might go far toward clarifying the industry's position on controls.

TECHNICAL NOTES

ARCHER E. KNOWLTON

(From papers presented at recent Conference Internationale des Grande Reseaux Electriques a Haute Tension)

Double conductors arranged vertically were found in France to withstand 2 to 2.4 times as much current as the horizontal arrangement before "sticking" or "freeing." (411)

Cables are now being produced successfully on a commercial scale by threading insulated conductors into pre-extruded lengths of aluminum tubing and then swaging the sheath into a contracted snug fit. (203)

Aluminum sheath reduces cable weights from 20 to 70%; mechanical sealing of joints has been devised; particularly advantageous for gas pressure cable. (203)

Lightning outages of 48.3 per 100 miles per year on an unshelded, ungrounded, wood and porcelain transmission line were reduced to 0.6 by shielding, grounding at each structure and improving the spacing and impulse strength. (212)

Weight of transmission towers above ground should be proportional to the equivalent tower height and the 2/3 power of the resultant of combined transverse and longitudinal pulls. (218)

Paris 220-kv cable has been in service 109,340 hours, has transmitted 4,196,000,000 kwhr and has had but one serious incident, a stop-joint flashover. (221)

Concrete-filled steel-tube towers in Switzerland have half the weight, give a 21-fold increase in moment of inertia and a critical buckling load 3.5 times greater than the tubes alone. (223 and 229)

MANUFACTURERS and MARKETS

GE Sales, Profits Set First-Half-Year Record

Sales and profits of General Electric Co in the first six months of 1950 set a first-half record for the company.

Net earnings of GE and its consolidated affiliates were $77,445,000 in the period, 66% above the $46,553,000 earned in the first six months last year. This year's profit was equivalent to $2.68 a common share and 8.8¢ on each dollar of sales, compared to $1.61 and 5.8¢, respectively, last year.

Second quarter consolidated earnings this year reached $40,587,000, compared to $19,850,000 in the same quarter of 1949. Profits for these periods were equivalent to $1.40 and 68¢, respectively, per share of common and to 8.8¢ and 5.1¢, respectively on each sales dollar.

Consolidated net sales billed during the first six months this year totaled $881,050,000, or 10% more than last year. For the quarter ended June 30 sales of $462,600,000 were 19% above the $390,141,000 billed in the second quarter of 1949. Approximately $34.2 million has been distributed as dividends to some 250,000 stockholders for the first half year of 1950.

•

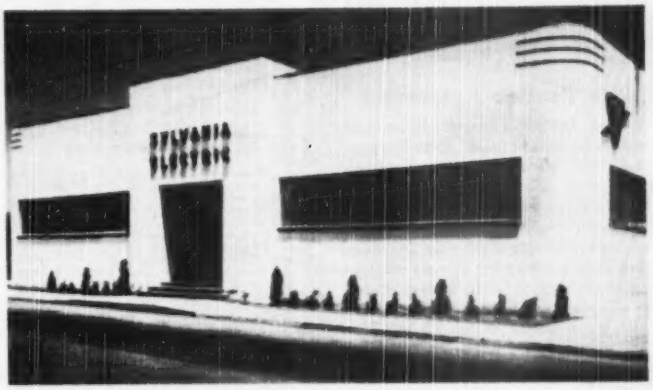
Kaiser Aluminum Plans Mead Plant Expansion

Kaiser Aluminum & Chemical Corp expects to have a seventh potline in operation at its Mead aluminum reduction plant near Spokane, Wash., by next March. Capacity of the company's nearby rolling mill at Trentwood is also being increased.

Cost is estimated at $2 million. The addition will boost capacity by about 15,000 tons of aluminum a year to an estimated peak output of more than 100,000 tons annually.

Kaiser has bought potline and rectifier equipment now standing idle in a government-built war-surplus plant at Riverbank, Calif., for about $400,000 and will move one potline to Mead. The Riverbank plant, which has three potlines, was operated by Aluminum Co of America during World War II but has been up for sale since 1945.

Arrangements have been made with Bonneville Power Administration for interruptible power to meet the needs of the new facilities—probably about 60,000 kw. Observers believe every effort will be made to assure power delivery so long as the international situation requires all-out production of airplanes. Last month Interior Secretary Oscar Chapman ordered BPA Administrator Paul Raver to let aluminum producers in the Northwest have as much power as is available from the Columbia River system. BPA now is delivering 115,000 kw of interruptible power to Kaiser, Alcoa, and Reynolds Metals Corp.



NEW OFFICE BUILDING and distribution center has been opened by Sylvania Electric Products, Inc, at Emeryville, Calif., near San Francisco. It will serve northern part of California, Nevada, Utah, and Hawaii. The building includes 30,000 sq ft of warehouse space

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GE Opens Service Shop Warehouse in Salt Lake

General Electric Co has completed expanded repair, maintenance, and warehouse facilities in Salt Lake City to serve apparatus users in the Rocky Mountain area.

The new facilities more than double service and repair capacity and provide approximately 50% more warehouse space. GE now has 30 such installations throughout the country.

Metal Prices
July 31, 1950

COPPER, Conn. Y., lb	$ .22½
LEAD, N. Y., lb	.12
ZINC, prime Western, E. St. Louis, lb	.15
TIN, Straits qual, N. Y., lb	.95½
ALUMINUM, base price	.17½
NICKEL, base price	.48
STEEL billets, Pitts., ton	53.00
STEEL scrap, No. 1 heavy, Pitts, ton	41.00

Westinghouse to Build Birmingham Repair Plant

Westinghouse Electric Corp is planning to build a new plant in Birmingham, Ala., for operation by the manufacturing and repair department. It will provide overhaul and repair facilities for industrial equipment, including motors and generators, to serve all parts of Alabama.

Construction will begin immediately. The two one-story brick and steel buildings, with a total floor space of approximately 50,000 sq ft, will be completed by June, 1951. The company's apparatus sales office will be moved to the new site.

•

De Laval Plans to Move Office Nearer Plant

De Laval Separator Co will move its executive staff and general office from New York City to a new building near the firm's factory in Poughkeepsie, N. Y.

The move is being made, George C. Stoddard, president, said, to effect a closer working relationship between management and factory and "to provide our general office people with far more pleasant living and commuting conditions."

Construction has been started on the 40,000-sq-ft brick and fireproof construction office building, expected to be

ready for occupancy late next summer.

A small executive and financial office with sales conference rooms will be maintained in New York. De Laval has had its general offices in New York since 1883. It was one of the first tenants of the then partially completed City Investment Building, one of the city's first skyscrapers, more than 40 years ago.

•

Reach Pension Agreement

Square D Co has completed five-year pension agreements and two to five-year wage and working conditions agreements with hourly-rate employees in Detroit, Milwaukee, and Peru, Ind. Pension payments, including social security and unemployment compensation, range from $100 a month for 25-year employees at the age of 65 to $130 a month for 35-year employees. The formula calls for pensions of $4 a month for each year's service up to 25 years and $3 additional for each year between 25 and 35.

MANUFACTURING BRIEFS

General Electric Co has canceled vacations for a number of employees in its three plants at Lynn and Everett, Mass., as a result of the Korean conflict. The action, GE said, was taken at the request of a "high military officer." For security reasons the number of employees and divisions affected was not disclosed.

Fatal night traffic accidents have been completely eliminated on thoroughfares in 11 cities where modern street lighting has been installed, the Street and Traffic Safety Lighting Bureau reports. Seven other cities reported night fatality reductions of 65% to 93% on relighted thoroughfares.

•

Canadian Westinghouse Co, Ltd, is building a $5-million lamp manufacturing plant at Three Rivers, Quebec. The new factory, which will have more than 75,000 sq ft of floor space, is expected to go into operation about Jan 1. It will employ about 300 persons and have an annual payroll of over $500,000.

A new 20-minute Technicolor motion picture on home freezers and freezing is being released for public showing by General Electric Co. The film, titled "Assignment for Peace," stresses the advantages to city and farm families of owning a freezer. It is being made available to interested groups through major GE appliance distributors.

NEW ELECTRICAL CONSTRUCTION

A weekly selection of U. S. electrical construction projects announced by private and government utility systems involving more than $70,000. Also listed are major industrial and construction jobs where electrical work is indicated or implied

UTILITIES

Proposed Construction

Ark., Salem—North Arkansas Electric Co-operative, Salem, warehouse and office. Plans deposit $25. Gen. contr., Cromwell & Assocs., 201 Hall Bldg., Little Rock, archts.

Ill., Hanover—City, electric generating plant. Approx. $1,200,000. Ralph S. Hansen, Savanna, consult. engr.

Ind., Wabash—Public Service Co. of Indiana, Wabash, sub-station on 140-acre tract. $1,000,000 with equip.

Ia., Cherokee—State Bd. Control, Des Moines, plans by Ralph Arnold, state archt., Des Moines, power and light sys. extens., imprvs., Cherokee State Hospital, $12,000.

Kansas—Kaw Valley Electric Co-operative, Topeka, 169.55 mi. rural distr. lines and 24.67 mi. conversion lines, $200,000, Frank Horton & Co., Lamar, engrs.

Mississippi—Alcorn Electric Power Assn., Corinth, 128 mi. rural distr. lines, sys. imprvs., Alcorn Co. $250,000. Allen & Hoshall, 65 McCall Pl., Memphis, Tenn., consult. engrs.

Montana—Bureau Reclamation, Dpt. Interior, Bldg. 1A, Denver Federal Center, Denver, Colo., control switchboards, annunciator, cabinets, battery chargers, Hungry Horse Power Plant, Hungry Horse Proj., Mont. Spec. 3077. Extended date. L. N. McClellan, Bldg. 1A, Denver Federal Center, Denver, Colo., ch. engr.

Nebraska—Panhandle Rural Electric Membership Assn., Alliance, rural distr. lines, Arthur Co. $420,000. Raymond H. Reed & Co., Columbus, consult. engr.

New Mexico—Continental Divide Electric Co-operative, Grants, 200 mi. 24.4 kv rural distr. lines, McKinley Co. $790,000. Southwest Engineers, 510 Transit Tower, San Antonio, Tex., consult. engrs.

N. M., Los Alamos—U. S. Atomic Energy Comm., Los Alamos, 130 line utilities, incl. roads, water mains, gas mains, sewers, sewer treatment plant, steam distr., underground 13-2KV electrical distr. sys., etc. Proj. C-TA-16. $1,600,000-$2,200,000. Plans deposit $100.

N. Y., St. George—Comr. Marine & Aviation, Pier A, North River, foot of Battery Pl., New York, Zone 4, electrical facilities for viaduct and main terminal bldg., Sect. 2, St. George Ferry Terminal, Contr. 2676 R. Plans deposit $15.

North Dakota—Bureau Reclamation, Dept. Interior, Bldg. 1-A, Denver Federal Center, Denver, Colo., distr. boards, battery charging, control equip., etc., for Rugby, Devils Lake and Jamestown Substations, Transmission Div., Missouri River Basin Proj., Spec. 3107.

O., Hamilton—City, C. F. Schwalm, act. city mgr., Municipal Bldg., municipal electric plant and distr. sys. addn., Div. A, switching station on N. 3 St.; Div. B, modification to underground duct and cable sys. incl. miscellaneous work, etc. Substation 2 Contr. 20. $1,237,000. Emery, Merker & Emery, 510 Toledo Trust Bldg., Toledo, consult. engrs.

O., Toronto—Ohio Edison Co., 47 N. Main St., Akron, altering power plant to eliminate soot, ash and smoke. $800,000.

Oklahoma—U. S. Eng., P. O. Box 61, Tulsa, Zone 2, administration and service bldg. for operation Fort Gibson Reservoir and power plant, $300,000; protective dikes along the west shore line Fort Gibson Reservoir, $125,000; relocate Wagoner County roads across $200,000; relocation M K & T Rwy main line across Fort Gibson Reservoir $2,000,000; relocation U. S. 69 hy. across Fort Gibson Reservoir, $350,000 all foregoing. Fort Gibson, Muskogee Co.

Oklahoma—U. S. Eng., P. O. Box 61, Tulsa, Zone 2, relocation Cherokee County roads in basin of Ten Killer Ferry Dam $175,000; switchyard and electric equip., $300,000; power house and auxiliaries, $900,000; penstocks and surge tower, $350,000; furnishing, installing switchboard and generator leads, $180,000, all foregoing for Ten Killer Ferry Dam on Illinois river, Gore, Muskogee Co.

Oregon—Bonneville Power Admin., 827 N.E. Oregon St., Portland, construct McKinley switching station and Norway substation, Inv. 5264, Coos Co. Plans deposit $25.

South Dakota—Bureau Reclamation, Dpt. Interior, Bldg. 1-A, Denver Federal Center, Denver, Colo., furnishing, del. f.o.b. cars shipping point or f.o.b. cars Oral, outdoor switchyard, incl. power distr. and instrument transformers, power circuit breaker, disconnecting switches, power and lighting cabinets, supporting steel structures, etc. for the Angostura Switchyard, Cheyenne Div., Angostura Unit, Missouri River Basin Proj., Spec. 3127.

Tenn., Oak Ridge—U. S. Atomic Energy Comm., Oak Ridge, 80x80 ft. center portion 40x90 ft. structural steel experimental research bldg., incl. equip., 5,000 gal. storage tank, water supply lines, electric power supply lines, and 1,150 ft. 9 ft. and 850 ft. 8 ft. fencing, etc. Plans deposit $35.

Tex., Bearne—City, electric light distr. sys., extens. and imprvs. $170,000. Garrett Engr. Co., 5008 Almeda Rd., Houston, engrs.

Low Bidders & Contracts Awarded

California—Pacific Gas & Electric Co., 245 Market St., San Francisco, constr. rock fill dam and 1,094 ft. 14,000 ft. water tunnel Bear River Development on California's Mokelumne River, to Utah Constr. Co., 79 Salt Lake, Salt Lake City, Utah. Total est. $11,000,000.

Fla., Tallahassee—City, electric transmission lines from main plant at St. Marks from W. L. Coston & Sons, 1st National Bldg., Birmingham, Ala., $508,672; extens. city's electric distr. sys., from Harrison-Wright Co., Inc., 116 W. 3 St., Charlotte, N. C., $197,732.

Ind., Bedford—Emerson Electric Mfg. Co., 8100 W. Florissant Rd., St. Louis 21, Mo., 80,000 sq. ft. brick, steel, concrete mfg. plant air-conditioning to L. O. Stocker Co., 3928 Lindell Blvd., St. Louis 8, Mo.

S. C., Charleston—South Carolina Power Co., c/o contractor, plant to house electric generating unit, to Southern Constr. Co., 1235 Reynolds St., Augusta, $407,000.

INDUSTRIAL, COMMERCIAL & PUBLIC BUILDINGS

Proposed Construction

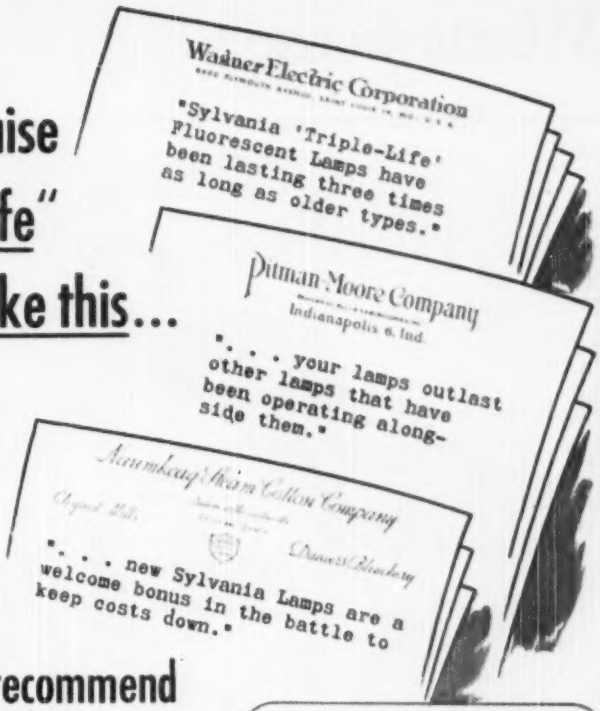
Ill., Chicago—Bids Asked—Parkway Garden Homes, S. Parkway and Calumet Sts., thirty-five 694 unit brick, concrete apartments, $3,500,000. Holsman, Holsman, Klekamp & Taylor, 39 S. State St., Zone 3, archt.

Tex., Houston—C. E. King & Assoc., 4110 Dennis St., plans by Robert W. Clemens & Assoc., 4110 Dennis St., 10,000 frame homes, concrete post and slab fdn., to be known as "Kingston" $57,500,000; commercial structures project, stores, etc., $17,500,000; community center, $700,000, in 3,000 acre tract off Humble and Mt. Houston Rds., near here. Robert M. & Robert W. Atkinson, 1st. Natl. Bank Bldg., engrs.

Low Bidders & Contracts Awarded

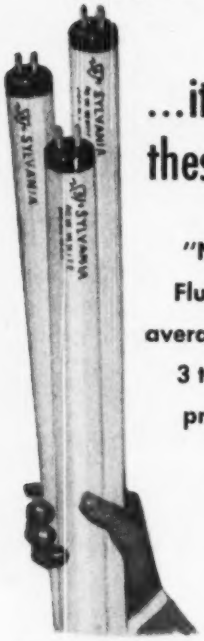
Ky., Brandenburg—Mathieson Chemical Corp., Whiteker Bldg., Baltimore, Md., design and construct plant for conversion of natural gas by product to hydrocarbon chemicals, to Stone & Webster Engr. Corp., 90 Broadway, New York, N. Y. Total est. cost $13,000,000.

When companies praise SYLVANIA "Triple-Life" Fluorescent Lamps like this...


Wagner Electric Corporation
"Sylvania 'Triple-Life' Fluorescent Lamps have been lasting three times as long as older types."
Putnam Moore Company
Indianapolis 6, Ind.
". . . your lamps outlast other lamps that have been operating alongside them."
". . . new Sylvania Lamps are a welcome bonus in the battle to keep costs down."

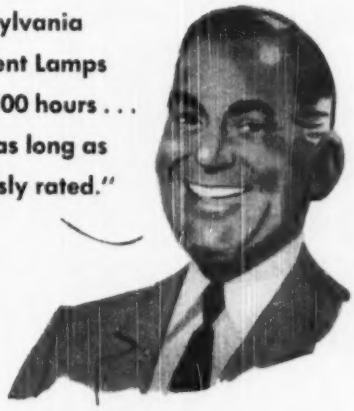
Scores of letters from many types of businesses praise the long life, brighter light, and economy of Sylvania's "Triple Life" Fluorescent Lamps.

Such proof of fine performance helps build greater confidence in your products and services ...more good-will for your company.



...it's smart to recommend these lamps like this:

"New Sylvania Fluorescent Lamps average 7500 hours . . . 3 times as long as previously rated."



New Beautiful Fluorescent Lamp Colors

Now Sylvania offers new fluorescent color tones in all the popular type lamps . . . for offices and schools . . . for sales areas and show rooms.

1. **Standard Cool White (4500°)** . . . a clean white light for general lighting and work areas.

2. **De Luxe Cool White** . . . A cool white with some deep red to improve the appearance of many types of merchandise.

3. **Warmtone (Warm White)** . . . The warm color atmosphere produced by this lamp enables it to combine beautifully with incandescent lighting.

4. **De Luxe Warmtone** . . . a lamp for the warmest color effects, with added deep red radiation for color emphasis.

FLUORESCENT LAMPS, FIXTURES, SIGN TUBING, WIRING DEVICES, LIGHT BULBS, RADIO TUBES, TELEVISION PICTURE TUBES; ELECTRONIC PRODUCTS; ELECTRONIC TEST EQUIPMENT; PHOTO LAMPS; TELEVISION SETS

SYLVANIA ELECTRIC

Sylvania Electric Products Inc.
Advertising Dept. L-2508
1740 Broadway, New York 19, N. Y.

Please send me detailed information concerning the new Sylvania "Triple Life" Fluorescent Lamps.

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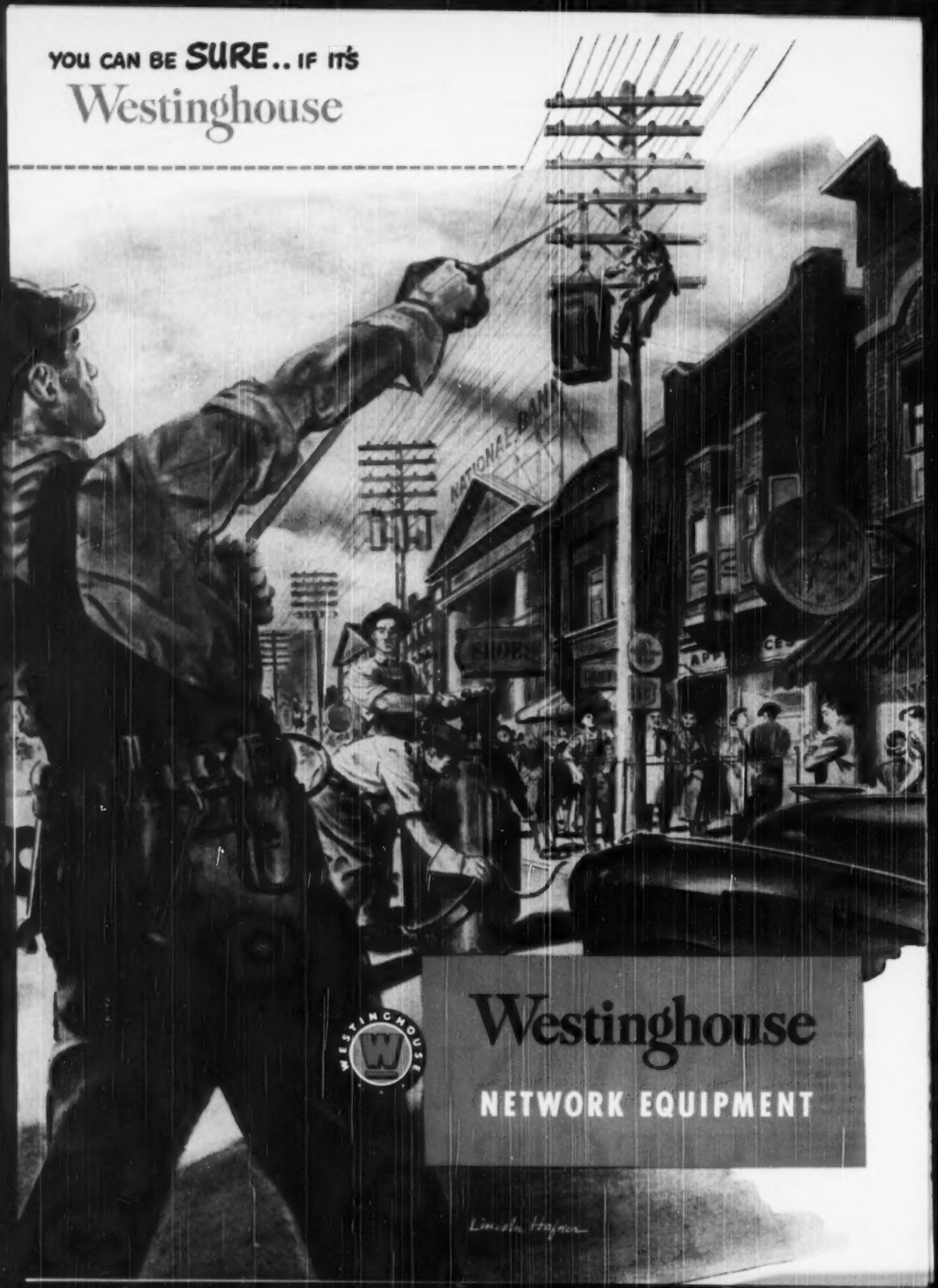
Company_____

Street_____

City_____ Zone____ State_____


YOU CAN BE SURE.. IF IT'S
Westinghouse
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NETWORK EQUIPMENT

When the Poles Get "Top-Heavy"..

SECONDARY NETWORKS PAY!

As you plan system improvements, examine the smaller load-density areas . . . where the load is growing *fast* . . . where demand necessitates frequent additions to distribution facilities. Then ask yourself this question:

Will the maintenance of satisfactory service in these areas eventually lead to an expensive, overcongested condition . . . to "top-heavy" poles?

If the answer is "yes" . . . *it's time for a secondary network!*

The high quality of service provided by the secondary network system is just as essential to the electrical growth of the smaller commercial district as it is to the sprawling business sections of the big city. What's more, it gives you the flexibility to accommodate extensions, load shifts and future growth *economically*. It permits healthy cuts in operating and maintenance expense that add up to substantial, long-term savings . . . that spell *economy* in the final accounting.

A quarter-century ago, Westinghouse introduced the first three-phase, automatic network protector. Continuous pioneering in this field has led to such present-day developments as the first submersible, dry-type transformers. This long experience . . . our competent facilities, engineers and calculating boards...are available to help you with *your* network planning. Call your nearest Westinghouse office or write for Booklet B-4002, "A-C Secondary Network Systems".

Westinghouse Electric Corporation, P. O. Box 868, Pittsburgh 30, Pa. J-97145

Westinghouse "Standardized" network transformers match any degree of underground or overhead service, from liquid-filled units to submersible dry-type units.

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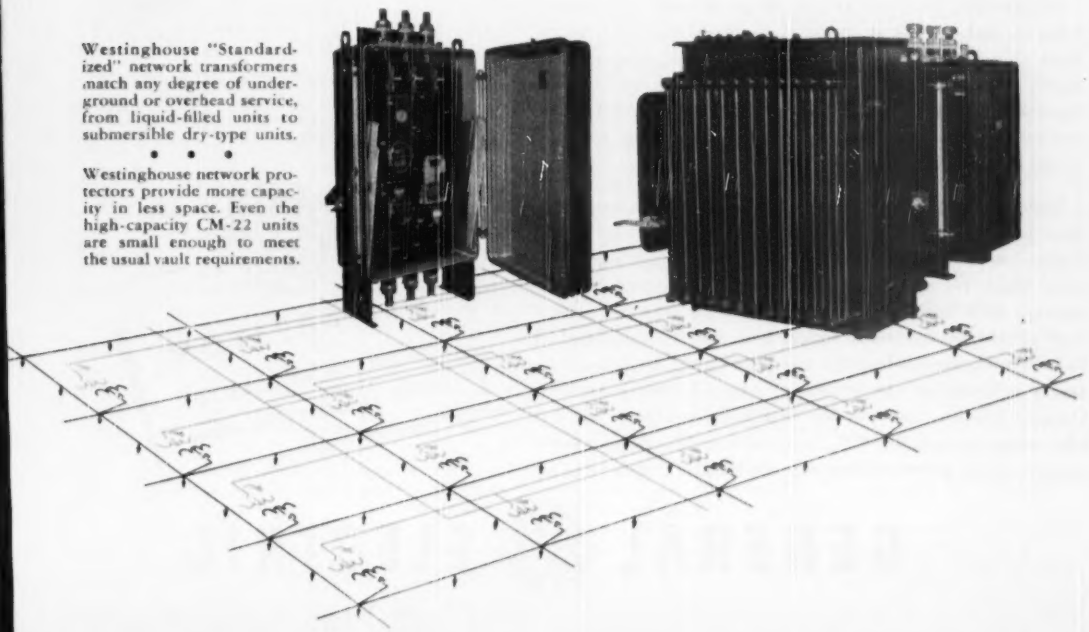
Westinghouse network protectors provide more capacity in less space. Even the high-capacity CM-22 units are small enough to meet the usual vault requirements.



G-E Deltabeston® AVA Cables

FOR EXTRA CURRENT CAPACITY IN EXISTING RACEWAYS

You'll find the problem of increasing the current capacity of cables in existing raceways easily solved when you rewire with General Electric Deltabeston asbestos-varnished cambric cables. In fact, where used to replace Type R cables in conduit, Deltabeston AVA cables can increase current-carrying capacity as much as 64%.*

Deltabeston AVA cables are insulated with heat-beating asbestos and varnished cambric—a combination of insulations that permits cable operation at high temperatures. That's why, at normal ambient temperatures in dry locations (as defined by the National Electrical Code) G-E AVA cables can safely permit far greater current loads than ordinary Types R or RH building wires.

More efficient insulation... more current per unit area than possible with rubber-insulated cables... add up to real savings on your wiring jobs. You realize savings in materials, since there are no raceways to replace... savings in time, because AVA cables are easy to install. For any modernization job, or for new construction, look into the suitability of G-E Deltabeston AVA cables for your power circuits. Additional information can be easily obtained from your local General Electric Construction Materials distributor or district office. Section W6-827, Construction Materials Department, General Electric Company, Bridgeport 2, Connecticut.

* Calculations show that, in 3-inch conduit, three 500 MCM Type R cables can be replaced by three 600 MCM Type AVA cables with a gain of 64% in current-carrying capacity.

DELTABESTON wires and cables built to beat the heat

GENERAL ELECTRIC

NEWS ABOUT PEOPLE

Sutherland Made General Manager, Euler Executive VP of Pacific G&E

Norman R. Sutherland has become vice president and general manager of Pacific Gas & Electric Co. He succeeds W. G. B. Euler, who has been named executive vice president to assist the president in general supervision of the company's affairs. Euler also will direct the purchasing department and the department of general construction.

Sutherland has been with the company for 37 years, most recently as vice president and assistant general manager. He started as a clerk, was appointed commercial manager in the general office in 1923, and in 1945 became manager of the San Francisco division.

NORMAN R. SUTHERLAND

He returned to the general office in 1947 as vice president in charge of sales and the next year was made vice president and assistant general manager. Sutherland has been treasurer of the Pacific Coast Electrical Association since 1927 and is a member of the San Francisco Electric Club.

Euler began his utility career in 1910 with the engineering staff of Great Western Power Co. Later he was director of operations. He was general superintendent of Great Western when it merged with PG&E and was made general superintendent of the San Francisco and East Bay divisions, directing physical operations of both the gas and electric departments.

Euler was named chief engineer in 1940, vice president in charge of operations in 1944, and vice president and general manager in 1947. Before entering the utility field he worked for General Electric Co.

W. G. B. EULER

•

GE Transfers W. S. Hill, Makes Other Changes

W. Scott Hill, vice president in charge of engineering for Locke, Inc, Baltimore, has joined General Electric Co's Apparatus Department as manager of the commercial engineering division of the Transformer and Allied Product Divisions at Pittsfield, Mass.

GE also has reported a number of other engineering and sales appointments. Ralph E. Donnelly, sales engineer in the New York office, has been made assistant manager of the Fitchburg turbine sales division at Fitchburg, Mass. John R. Casey, a turbine specialist in the Philadelphia office, has been named manager of the newly established gas turbine sales division of the Turbine Divisions, with headquarters in Schenectady.

Dwight E. Moorhead, who has been administrative assistant to the Manager of the Small and Medium Motor divisions, has been made manager of the San Jose (Calif.) motor divisions. Also in the Small and Medium Motor Divisions, Thorn L. Mayes now is manager of the Lynn motor engineering division and will be responsible for the engineering of all motors made at the Lynn, Mass., works.

Hill joined GE in 1923 and served in the Central Station Engineering Department at Schenectady and on the New York sales staff. In 1939 he was made assistant district engineer of the New York district and in 1945 assistant district engineer and engineer of the Buffalo sales office. He joined Locke in 1946 as manager of engineering in charge of research, development, and design activities and became vice president in 1948.

Donnelly went to GE in 1937 and spent three years as a turbine specialist in the New York Apparatus Department sales office before becoming a sales engineer in the Central Station Division. Casey also joined GE in 1937 and in 1941 became a turbine specialist in the Philadelphia office of the Apparatus Department. In the spring of 1942 he acted as liaison between GE and various government agencies.

Moorhead has been in GE's Motor Divisions since 1931. He was assistant to the manager of the Motor Divisions, engaged in sales work, and in 1948 was named assistant to the manager of the Small and Medium Motor Divisions. Earlier this year he was appointed administrative assistant to the manager of the divisions.

Mayes has been with GE since 1927. Among positions he has held have been induction motor design and application engineer at the Oakland, Calif., Works, where he was in charge of special ac motor design and application; engineer and superintendent of the motor division of the Oakland Works, and works engineer. He went to the staff of the manager of engineering, Apparatus Department, in 1949. Most recently he has been staff assistant to the manager of engineering of the divisions.

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Illuminating Engineers Elect Sturrock President

(See Front Cover)

Walter Sturrock, head of the engineering publications section of General Electric Co's Lamp Department at Nela Park, Cleveland, has been elected president of the Illuminating Engineering Society. He has been vice president since 1948.

Other officers elected were E. M. Strong, Cornell University, vice president; R. F. Hartenstein, Ohio Edison

Co, treasurer; and A. H. Manwaring, Philadelphia Electrical & Manufacturing Co, general secretary. New directors are L. A. Hobbs, Smoot-Holman Co, Inglewood, Calif., and Roy A. Palmer, Duke Power Co, Charlotte, N. C.

Sturrock joined GE's Lamp Works in 1916. In 1930 he was made engineer in charge of general interior lighting applications, and in 1935 he was appointed to the position he now holds.

For a number of years he has been a special lecturer on illumination at Case Institute of Technology in Cleveland. During World War II he served as lighting counselor in Washington, where he guided government department heads in the proper use of lighting for top industrial production. He was one of the first fellows of IES.

•

George Conant has been named manager of Plumas-Sierra Electric Cooperative, Portola, Calif. He succeeds L. C. DeArmond, who resigned to devote full time to the Portola Water Co and Portola Insurance Agency. Conant has been with the co-op for three and a half years, most recently as assistant manager.

F. Warren Cooper has been appointed comptroller of Public Service & Gas Co, replacing **Franklyn Heydecke,** who has retired after 50 years of service. **Frank Freer, Jr.** succeeds Cooper as assistant comptroller. Cooper joined Public Service as a bookkeeper in 1920 and has been assistant and chief accountant, assistant general auditor and assistant comptroller. Freer has been chief accountant for the past five years. Heydecke is president of the New Jersey Utilities Association and has served on Edison Electric Institute's accounting advisory committee.

L. R. Douglass, assistant regional director of the Reclamation Bureau's Region III since 1944, has been named acting director of power of the Boulder Canyon pending confirmation of his appointment as director of power. He succeeds the late **Carlo P. Christensen. Lloyd J. Hudlow** has been acting director of power. Douglass, who has been with the bureau for 17 years, took part in the design of certain phases of Hoover Dam and was the bureau's first safety engineer.

Bert W. Whitehurst has rejoined Stone & Webster Engineering Corp, Boston, as industrial engineer. Recently he has been project engineer with Anderson-Nichols & Co, Boston. His earlier experience with Stone & Webster included electro-mechanical assignments on the Manhattan project at Oak Ridge, Tenn.

W. N. Matthews Makes Wefeler Sales Manager

H. H. Wefeler has been appointed sales manager of W. N. Matthews Corp, St. Louis.

Wefeler joined the firm in 1925 as a draftsman. He began to work on design of new products and improvement of old ones and later went into sales engineering.

H. H. WEFELER

For a number of years he had charge of sales in the St. Louis district. Then he was made assistant sales manager under the sales vice president.

OBITUARY

Arthur H. Timmerman

Arthur H. Timmerman, 79, retired vice president of Wagner Electric Corp, died July 18 in Dallas, Texas. He retired from Wagner last March after 50 years with the firm.

Before joining the manufacturing company he taught physics at Washington University in St. Louis and was a professor of physics and electrical engineering at the Missouri School of Mines and Metallurgy. He helped form and was president of the American Association of Electric Motor Manufacturers, later the Electric Power Club. When it became the National Electrical Manufacturers' Association through a merger he was a member of the board of governors.

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James D. Mortimer

James D. Mortimer, 70, former president of North American Co and other companies in its system, died at Belfast, Maine, July 19.

Mortimer joined Puget Sound Electric Railway Co in 1902 and three years later went with the late S. Z. Mitchell to Electric Bond & Share in New York. There he served as engineer, manager of the operating department, and vice president.

In 1911 he joined North American as a vice president and as president of the Wisconsin properties. He was elected president of the holding company and its subsidiaries in 1914 at the age of 35. As president he was an early advocate of the indeterminate permit and was one of the first operators in this country to adopt pulverized fuel. Mortimer also headed Western Power Co of Canada and North American Light & Power Co and was a director of Allis-Chalmers Manufacturing Co. He resigned from North American in 1920 and later specialized in public utility reorganizations and investment securities in New York.

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George W. Melver, 65, chief engineer of Toledo Edison Co and until recently a director of the utility, died July 24. He started with Public Service Co of New Jersey in 1909 and later was resident engineer for E. W. Clark Management Co and general superintendent and chief engineer of Wisconsin, Minnesota Light & Power Co. After World War I he supervised rebuilding of utility systems in France and Germany. He joined Toledo Edison in 1923.

Chester C. Thorpe, 68, member of the Ohio Public Utilities Commission for eight years, died July 25 at his home in Salem, Ohio.

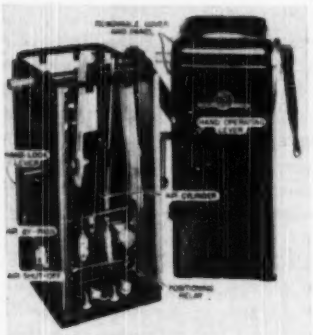
George P. Abbott, 64, for 31 years superintendent of power for the Brown Co at Berlin, N. H., died in Berlin July 23. Among his responsibilities were major hydro and steam plant developments and a pioneer electric boiler installation. He retired three years ago.

Walter H. Stauffacher, 54, Redmond, Ore., manager for Pacific Power & Light Co, died July 26 at Redmond.

William Stewart Hulse, 79, electrical engineer, died July 14 in Jersey City, N. J. He started with Fort Wayne (Ind.) Electric Light Co, then joined a German firm and handled the erection of a lighting plant in Buenos Aires, Argentina. Later he worked for General Electric Co, was a director of a Brussels, Belgium, utility holding company, and was a partner in Wood, Hulse & Yates Co, New York electrical contractors.

Millard H. Ronzone, treasurer of Copperweld Steel Co, died July 13.

NEW EQUIPMENT



Control Drive

CHARACTERISTICS of a driven device can be paralleled with those of other equipment to secure a unified system by means of a "characterized" control drive. It consists of a double acting air cylinder (with rigid supporting stand and enclosure), a positioning relay, and a manual operating wheel or lever. The drive is said to be ideal for outdoor power plants, foundries, fuming plants, and other process plants.

Change in control loading pressure of 0.10 psi is claimed to deliver full supply pressure to the piston air cylinder. They are furnished in two sizes: one size for torque requirements of 280 to 400 ft-lb and the other for requirements up to 1,500 ft-lb.

Bailey Meter Co, 1050 Ivanhoe Rd, Cleveland 10, Ohio

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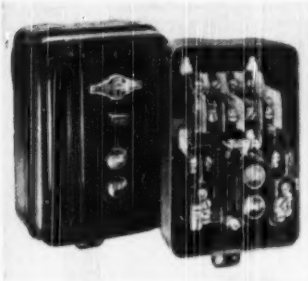

Magnetic Starter

AMONG FEATURES of a new magnetic starter are (1) dual voltage coils, (2) with or without built-in pilot controls, and (3) general purpose or water-tight enclosure. A Switchlet may be attached to either side of the starter to provide means for adding extra circuits.

The starter gives start-stop control and thermal over-load protection for polyphase and 1-ph squirrel-cage motors; also primary control of wound rotor motors equipped with secondary controls. It may be had in sizes to 5 hp, 220 v ac, and 7.5 hp, 440-550 v ac. Full description is in Catalog 50.

Furnas Electric Co, 1026 McKee St, Batavia, Ill.

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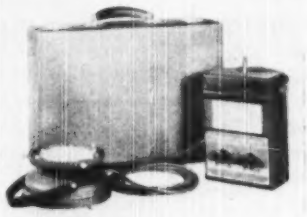

Portable Lightmeter

A PORTABLE lightmeter is designed to check low levels of illumination from 0-5 ft-c. According to the manufacturer it has been designed for use in areas where conventional meters could not record the light because of its dimness.

Type PF-13 lightmeter consists of a light-sensitive-cell detector mounted on a self-leveling gimbal and connected by a ten-foot lead to an indicator. Both units fit into a case the size of an overnight bag. The instrument is calibrated to take readings from 0 to 1 ft-c and from 0-5 ft-c.

General Electric Corp, Meter and Instrument Div, West Lynn, Mass.

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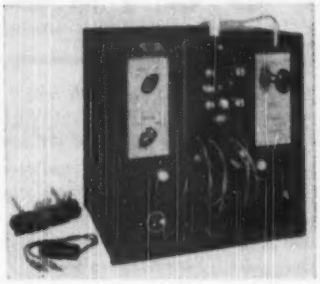
Process Timer

A NEW TIMER, the Cycl-flex, mounts in a 3⅞-in. diam hole for flush mounting in control panels of electronic heating equipment, molding machines, or processing equipment. Auxiliary contacts are operated by a clutch solenoid. These contacts, together with those operated after the time delay, provide four different load circuit combinations, eliminating relays in many applications.

The timer is rated at 10 amp, 110 v, and is available for 60, 50, and 25 c at 110 and 200 v. Time scales may be had from 0-30 sec and 0-10 hr.

Eagle Signal Corp, Moline, Ill.



Watthour Meter Test Table

WHERE there are space limitations, the Form HAPBL test table will test 1-ph and polyphase two and three-element watthour meters for full and light load, 50% power factor, and insulation breakdown.

The cabinet is 20x20x15 in., and may be mounted on a desk or bench or carried in a car or truck. Other tables available include those mounted on desks 40 in. wide and equipped with photoelectric revolution controls.

The States Co, 19 New Park Ave, Hartford 6, Conn.

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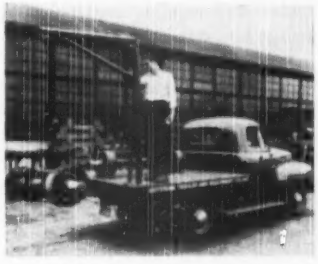


Truck Hoist

AN ELECTRICALLY powered mast-and-boom cable lift is rated for a straight vertical lift of 1,000 lb, or for a lift or pull of 2,000 lb with split block and half tackle. It operates from the regular battery, but is said to draw only a small amount of current.

Remote pushbutton control makes it possible for an operator to control a load from a distance of 8 ft. The 6-ft mast is topped by a 4-ft horizontal boom which swings through 360 deg. The 40 ft of wire cable travel at 6 in. per sec.

Hoist-O-Matic Co, Kansas City, Mo.

ELECTRICAL BUSINESS OUTLOOK

THE KOREAN EXPLOSION SENT A LOT OF PRICES SKY-HIGH. BUT MOST MATERIALS BOUGHT BY ELECTRIC UTILITIES AREN'T AFFECTED YET. The jumpiest commodities have been raw materials traded in open markets: tin, rubber, steel scrap, and foods. Generally speaking the major producers of metals, construction materials, fuels, and electrical equipment have held their prices near pre-Korea levels.

CAN THIS STABILITY CONTINUE AS THE DEFENSE PROGRAM GATHERS SPEED? PROBABLY NOT—UNLESS SOME CONTROLS ARE SLAPPED ON. Big producers fear such controls and so have hesitated to increase prices. But it is a fact that key materials are short—and will be shorter. So distributors are charging premiums. And some items must be bought from distant sources at extra freight cost.

Here are some examples of what's happening: Mill prices for steel are unchanged. But grey market steel is being sold at whopping premiums. And warehouse prices for structural shapes crept up a penny in the last month. Cement prices in most cities are virtually unchanged. But many distributors are shipping outside their normal area and putting the added freight on the bill.

How long will manufacturers' prices hold for metals, machinery, and construction materials? That depends on wages. IF ANOTHER BIG WAGE ROUND GETS STARTED, PRICE INCREASES ARE ON THEIR WAY. THE KEY FACTOR IS THE NEW WAGE CONTRACT FOR THE STEEL INDUSTRY. NEGOTIATIONS START IN NOVEMBER.

Meanwhile pressure will be strongest on materials immediately needed for the military program. They include copper, zinc, alloy steels, aluminum, lumber, and gasoline. There'll be less immediate pressure on coal, fuel oil, and most machinery items.

If the price spiral gets started, how high is up? No one knows, unless the Washington planners have set a point at which they'll apply price controls. But it's entirely possible that metals and construction materials will cost 10% more, on the average, by Christmas. Some scarce items might go higher.

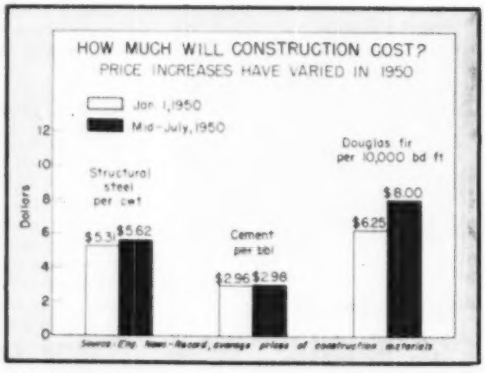
EVEN IF PRICE INCREASES ARE HELD TO A MINIMUM IN THE NEXT FEW MONTHS, UTILITY CONSTRUCTION WILL COST MORE IN THE SECOND-HALF YEAR THAN IT DID IN THE FIRST. That's clear from the chart below, which shows the nominal increase in steel and cement prices (extras will add more), and the big jump in lumber cost. Construction wages are higher too.

Construction costs were in an uptrend before the Korean War, (EW, May 15, p30). Military orders just add to the pressure caused by our record civilian construction boom. Similarly, fuel oil prices rose during the second quarter and might have been boosted again, without the war scare, to the present $2.15 per bbl. Industrial demand is the main reason. Utilities won't feel the added effects of military demand for a while yet.

WITH COSTS GOING UP, WHAT ABOUT REVENUES? Power sales will rise along with industrial activity—and with the addition of a record number of residential customers. Unless fuel costs jump more than expected, utility earnings will show continued improvement—before the tax collector takes his share.

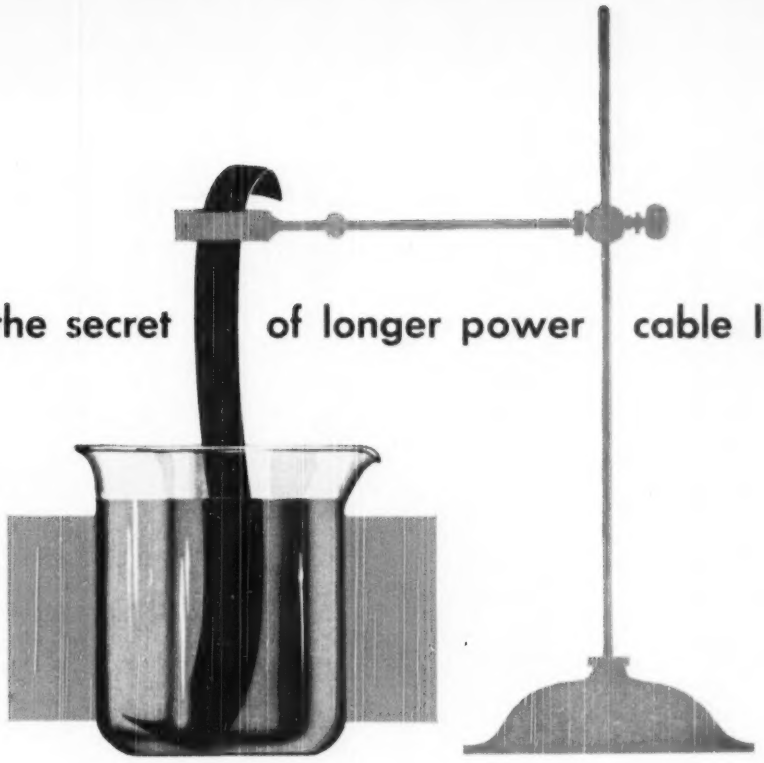
ACTUALLY THE BIGGEST COST INCREASE UTILITIES FACE MAY BE THE PROSPECTIVE INCREASE IN TAXES. The increase in the regular corporate income tax rate from 38% to 45% will cost the power industry about $70 million. That's on the basis of earnings for the 12 months ended March 31. Net available for common stock was $675 million, compared with $475 million paid in dividends. A $70 million additional tax bite would cut surplus retained after dividends by a third.

In 1951 an excess profits tax seems likely. If utilities are hit as hard as in the last war, the industry's earnings could drop $100 million from latest reported levels. The result of all this would clearly be higher costs for equity money to finance needed construction.

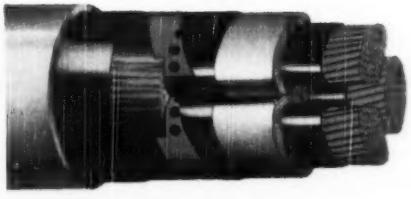


LUMBER PRICES rose more than any other item bought by utilities in the first half of 1950. But other commodities have been edging up too. Defense requirements probably will force further rises.

Here's the secret of longer power cable life–



Carbon Black *tape gives you a power cable construction—developed by Anaconda after many years of research testing—that greatly lengthens the life span of impregnated-paper-insulated power cable.*



Carbon Black constantly purifies the impregnating oil . . . keeps it clean . . . stabilizes it to prevent deterioration caused by high heat and electrical stress . . . removes oxidation products from the insulation and eliminates ionization discharges.

Now, *CB** plus F-3** (the alloy-lead sheath amazingly resistant to slow-bending fatigue, creep, burst, abrasion, vibration and aging) offer you the best power cable you can buy—in design, construction, performance, long life and economy—ANACONDA *Type CB (Carbon Black) Power Cable.* Get *all* the facts today at your nearest Anaconda Sales Office. Anaconda Wire & Cable Company, 25 Broadway, New York 4, New York.

*CB—Carbon Black (U. S. Patent 2,102,329) Reg. U. S. Pat. Off.

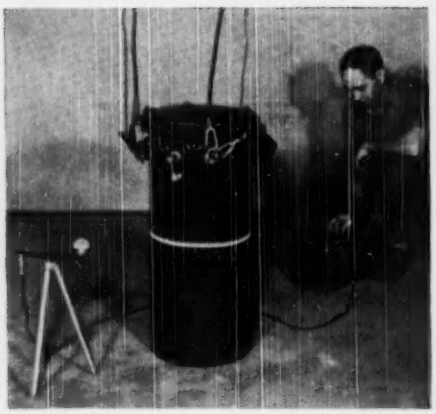
**F-3—Arsenic-Lead Alloy (U. S. Patents 2,300,788 and 2,374,753) Reg. U. S. Pat. Off.

The right cable for the job **ANACONDA®**

WIRE AND CABLE

Quiet Transformers MAKE GOOD NEIGHBORS!

Preparing for audible sound level test on a 1000 kva power transformer at Allis-Chalmers Pittsburgh Works sound laboratory.



Each distribution transformer design gets sound and harmonic analysis and is tested in accordance with ASA and NEMA standards.

In New Sound Laboratory Allis-Chalmers Engineers Track Down Causes of Transformer Noise.

IT'S SO QUIET in this sound laboratory you can almost hear a pin drop. The two foot walls of concrete, glass wool and acoustical tile absorb 99.98% of exterior noise power . . . keep ambient noise level down to 27 decibels.

Here, Allis-Chalmers engineers investigate audio noise, make sound level tests . . . gather data used in designing low sound level transformers. Even the most minute detail is considered. They check into core construction, clamping, ways of anchoring core and coils, location and number of accessories.

In their efforts to develop better, quieter distribution transformers, A-C engineers are working on complex problems of sound level, surge protection and construction . . . putting improved performance into every size and type. Research, engineering and production team up to give you the best in electrical design and construction.

These are a few reasons why Allis-Chalmers distribution transformers are welcome neighbors in quiet neighborhoods. For more information, contact your nearby A-C sales office, or write for specific bulletins.

Bulletin 61B7309A — ACP (Allis-Chalmers self-protected) distribution transformers to 100 kva.

Bulletin 01B6186B — General description of complete A-C power and distribution transformer line.

Bulletin 61B5726A — Rural transformers, including economical "RU" line, and ACP premium protected.

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